Access DB# 60538

# SEARCH REQUEST FORM

## Scientific and Technical Information Center

Requester's Full Name: P Squack Examiner #: 70400 Date: 3/15/02

Art Unit: 1614 Phone Number 30 84703 Serial Number: 09/905277

Mail Box and Bldg/Room Location: 2D05 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

**********

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

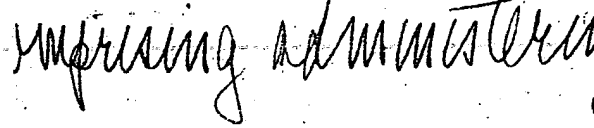
Title of Invention: Fc Receptor Modulators

Inventors (please provide full names): Jonathan B. Bazell

Earliest Priority Filing Date: 9/11/98

***For Sequence Searches Only*** *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search methods for inhibiting Fc receptor binding of immunoglobulin comprising administering a compound of



Ar = aryl (no heterocycles)

L = alkylene optionally with oxygen atoms

G = a bond, $-CH_2-$, alkylene

I = $-\overset{O}{\overset{\|}{C}}-O-$, $-\overset{N}{\overset{\|}{C}}-N-OH$, $-C(=O)CF_3$ or $-\overset{O}{\overset{\|}{P}}-O-$

BEST AVAILABLE COPY

**********

STAFF USE ONLY

Thanks

```
=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 10:23:08 ON 21 MAR 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)
```



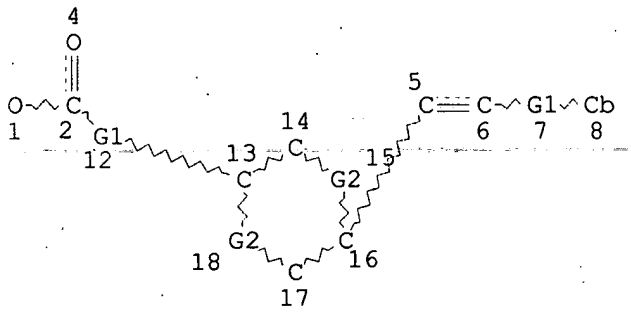
```
FILE COVERS 1907 - 21 Mar 2002  VOL 136 ISS 12
FILE LAST UPDATED: 19 Mar 2002  (20020319/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.
```

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

```
=>
=>
=> d stat que l31
L1                SCR 1840 OR 2127 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 O
R 2051 OR 2043
L2                STR
```

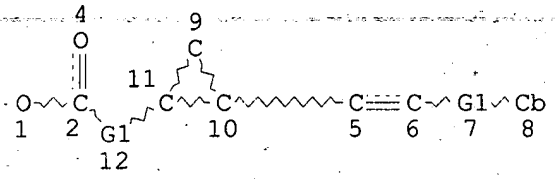



```
REP G1=(0-10) C
REP G2=(2-5) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  AT   8
```

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

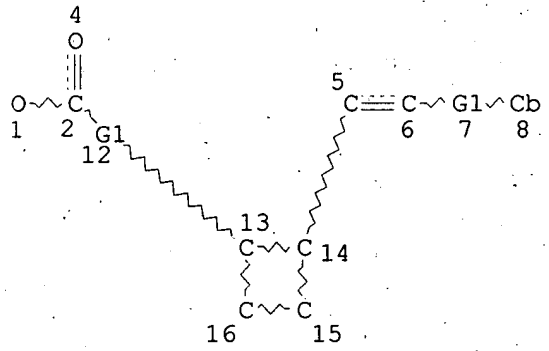
STEREO ATTRIBUTES: NONE
L3 0 SEA FILE=REGISTRY SSS FUL L2 NOT L1
L4 SCR 1840 OR 2127 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 OR 2051 OR 2043
L5 STR




REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 11

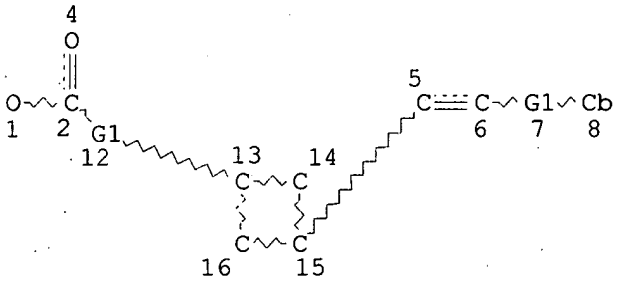
STEREO ATTRIBUTES: NONE
L6 STR




REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

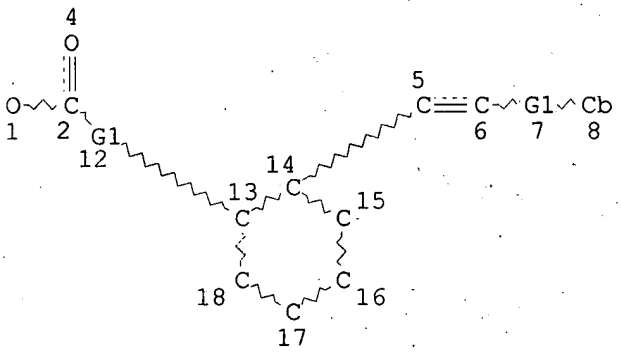
STEREO ATTRIBUTES: NONE
L7 STR



REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

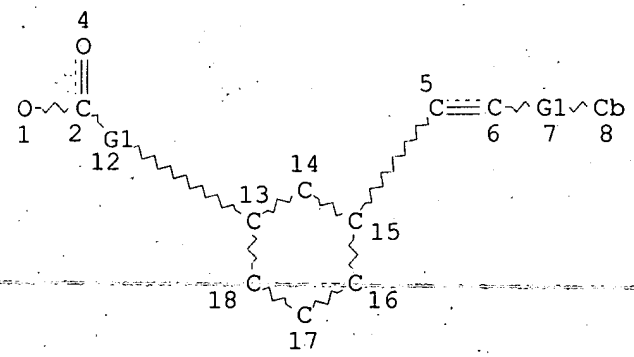
STEREO ATTRIBUTES: NONE
L8 STR



REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

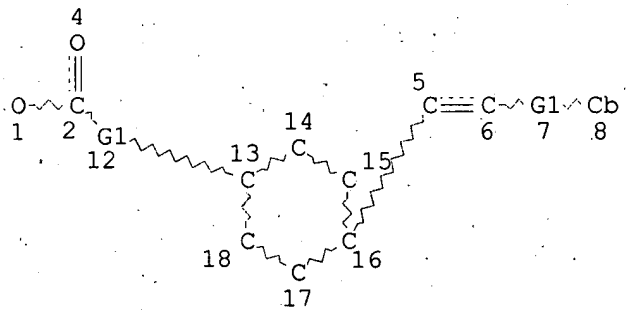
STEREO ATTRIBUTES: NONE
L9 STR



REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

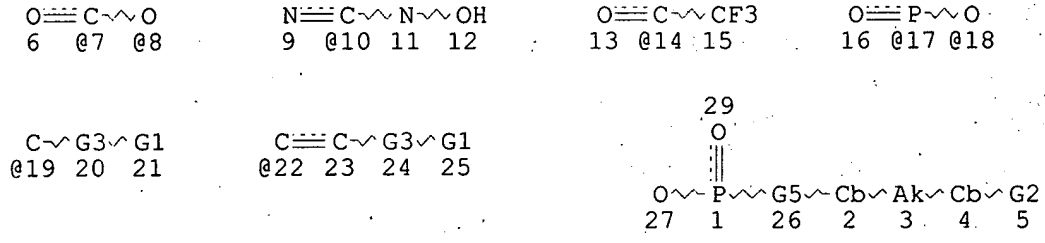
STEREO ATTRIBUTES: NONE
L10 STR



REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

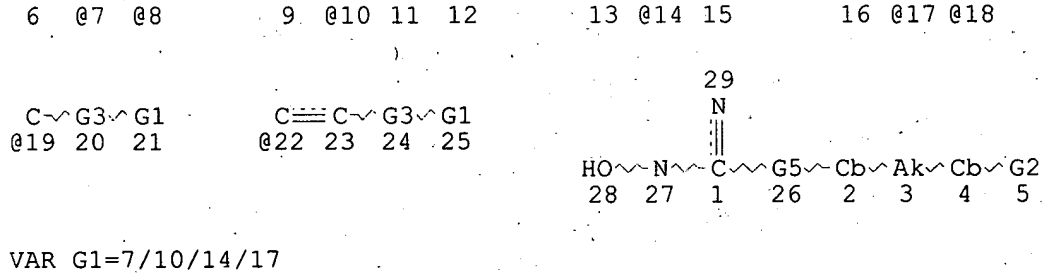
STEREO ATTRIBUTES: NONE
L11 ( 575) SEA FILE=REGISTRY SSS FUL L5 OR L6 OR L7
L12 ( 2502) SEA FILE=REGISTRY SSS FUL L8 OR L9
L13 ( 1035) SEA FILE=REGISTRY SSS FUL L10 NOT L4
L14 4087 SEA FILE=REGISTRY ABB=ON PLU=ON L11 OR L12 OR L13
L20 STR




VAR G1=7/10/14/17
VAR G2=7/10/8/14/17/18/19/22
REP G3=(1-10) C
REP G5=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 2
GGCAT IS MCY AT 4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 28

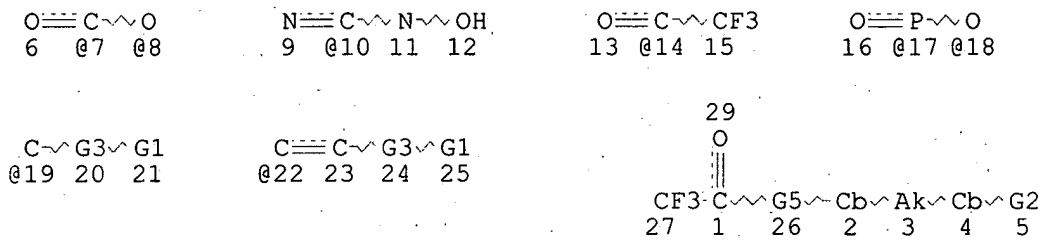
STEREO ATTRIBUTES: NONE
L21 94 SEA FILE=REGISTRY SSS FUL L20
L22 STR




VAR G1=7/10/14/17
VAR G2=7/10/8/14/17/18/19/22
REP G3=(1-10) C
REP G5=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 2
GGCAT IS MCY AT 4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 29

STEREO ATTRIBUTES: NONE
L23 STR

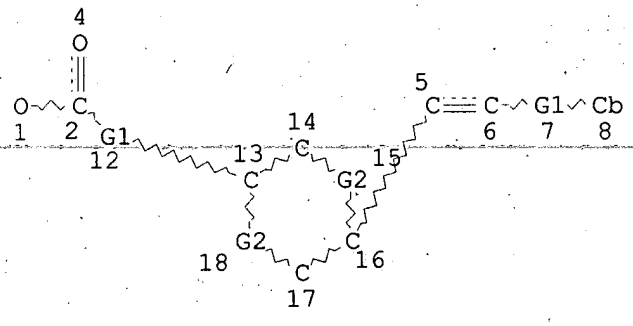


```
VAR G1=7/10/14/17
VAR G2=7/10/8/14/17/18/19/22
REP G3=(1-10) C
REP G5=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  AT   2
GGCAT   IS MCY  AT   4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  28

STEREO ATTRIBUTES: NONE
L24           21 SEA FILE=REGISTRY SSS FUL L22 OR L23
L25         4201 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 OR L14 OR L21 OR L24
L26         1831 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25
L27           21 SEA FILE=REGISTRY ABB=ON  PLU=ON  FC RECEPTOR?/CN
L29         6587 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27 OR (FC OR F(W)C)(W)RECEPTO
                 R?
L31            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 AND L29


=>
=>
=> d stat que l32
L1                SCR 1840 OR 2127 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 O
R 2051 OR 2043
L2                STR
```

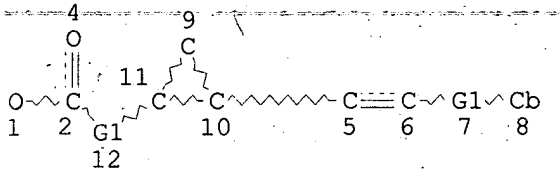


```
REP G1=(0-10) C
REP G2=(2-5) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  AT   8
```

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

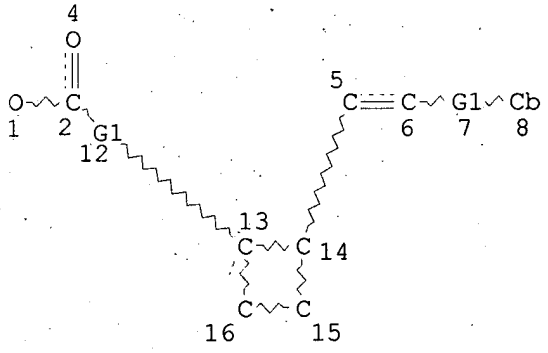
STEREO ATTRIBUTES: NONE
L3 0 SEA FILE=REGISTRY SSS FUL L2 NOT L1
L4 SCR 1840 OR 2127 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 O
R 2051 OR 2043
L5 STR




REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 11

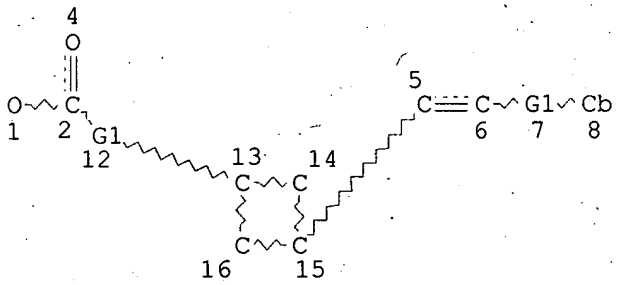
STEREO ATTRIBUTES: NONE
L6 STR




REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

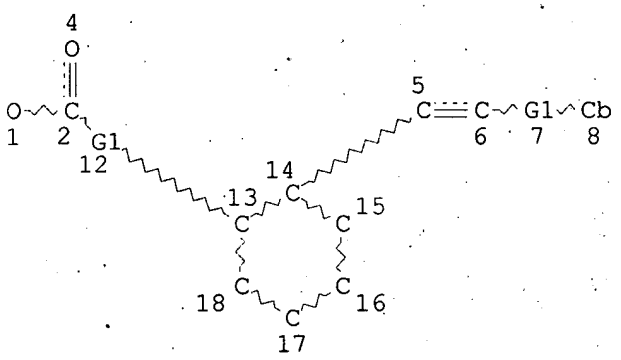
STEREO ATTRIBUTES: NONE
L7 STR




REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

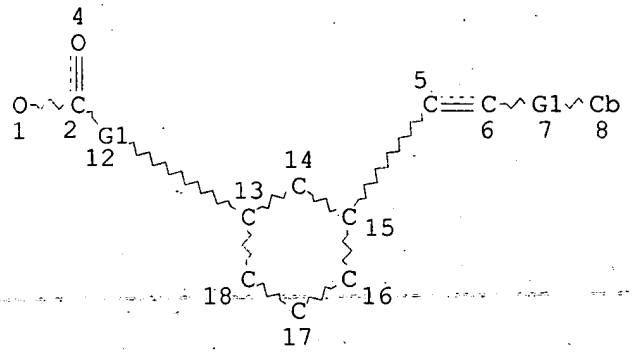
STEREO ATTRIBUTES: NONE
L8 STR




REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

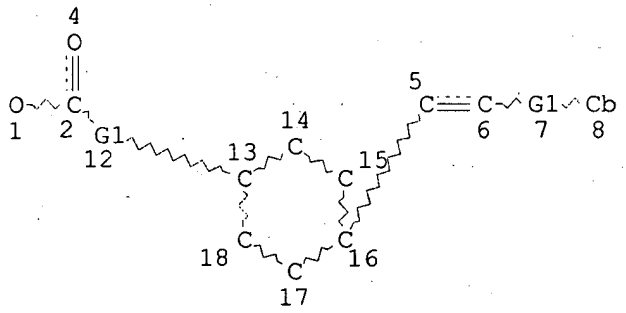
STEREO ATTRIBUTES: NONE
L9 STR



REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

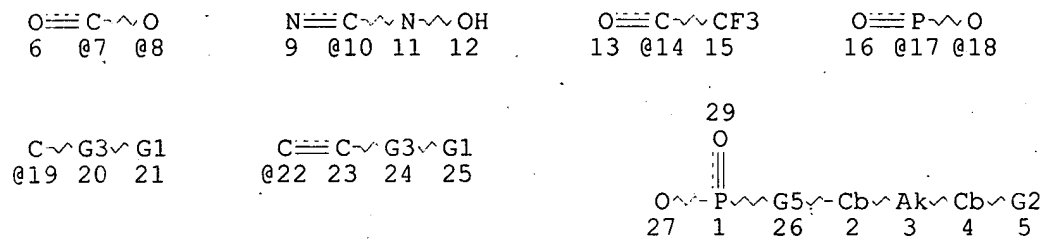
STEREO ATTRIBUTES: NONE
L10 STR



REP G1=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

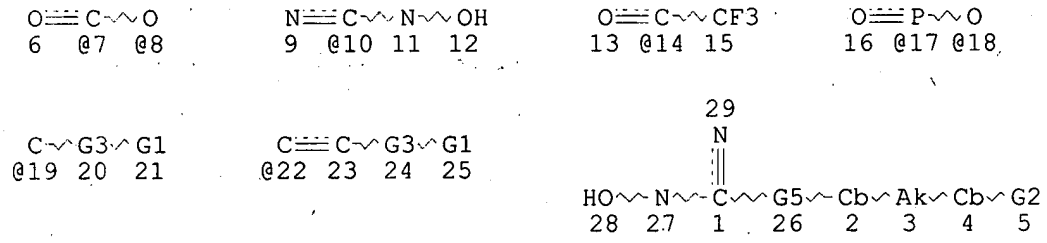
STEREO ATTRIBUTES: NONE
L11 ( 575)SEA FILE=REGISTRY SSS FUL L5 OR L6 OR L7
L12 ( 2502)SEA FILE=REGISTRY SSS FUL L8 OR L9
L13 ( 1035)SEA FILE=REGISTRY SSS FUL L10 NOT L4
L14 4087 SEA FILE=REGISTRY ABB=ON PLU=ON L11 OR L12 OR L13
L20 STR




VAR G1=7/10/14/17
VAR G2=7/10/8/14/17/18/19/22
REP G3=(1-10) C
REP G5=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 2
GGCAT IS MCY AT 4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 28

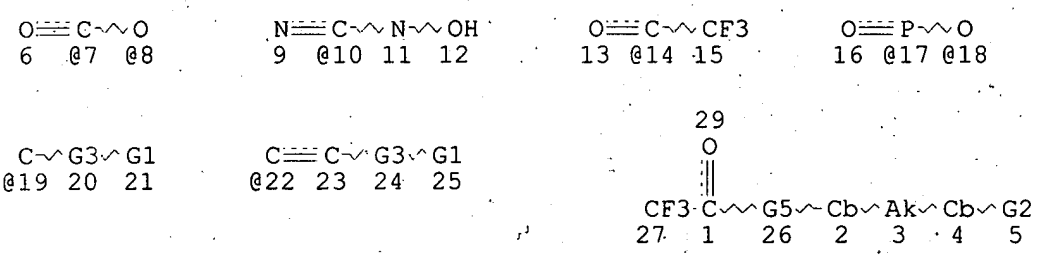
STEREO ATTRIBUTES: NONE
L21 94 SEA FILE=REGISTRY SSS FUL L20
L22 STR




VAR G1=7/10/14/17
VAR G2=7/10/8/14/17/18/19/22
REP G3=(1-10) C
REP G5=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 2
GGCAT IS MCY AT 4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 29

STEREO ATTRIBUTES: NONE
L23 STR




```
VAR G1=7/10/14/17
VAR G2=7/10/8/14/17/18/19/22
REP G3=(1-10) C
REP G5=(0-10) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  AT   2
GGCAT   IS MCY  AT   4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  28

STEREO ATTRIBUTES: NONE
L24           21 SEA FILE=REGISTRY SSS FUL L22 OR L23
L25         4201 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 OR L14 OR L21 OR L24
L26         1831 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25
L28        28801 SEA FILE=REGISTRY ABB=ON  PLU=ON  IMMUNOGLOBULIN?
L30       151724 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 OR ?IMMUNOGLOBULIN? OR
                 IG#
L32            1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 AND L30


=>
=>
=> d ibib abs hitrn l32 1

L32  ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         1977:567872  HCAPLUS
DOCUMENT NUMBER:          87:167872
TITLE:                    Furanone derivatives as fluorogenic reagents
INVENTOR(S):              Cleeland, Roy, Jr.; Grunberg, Emanuel; Leimgruber,
                          Willy; Weigele, Manfred
PATENT ASSIGNEE(S):       Hoffmann-La Roche, Inc., USA
SOURCE:                   U.S., 8 pp. Division of U.S. 3,969,373.
                          CODEN: USXXAM
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   5
PATENT INFORMATION:

     PATENT NO.       KIND  DATE          APPLICATION NO.   DATE
     ---------------  ----  --------      ---------------   --------
     US 4045487         A   19770830      US 1976-668179    19760318
     NO 7500485         A   19740906      NO 1974-485       19750214
     US 3969373         A   19760713      US 1975-590655    19750626
     US 4238589         A   19801209      US 1978-966527    19781204
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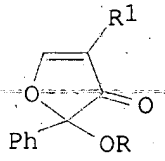
PRIORITY APPLN. INFO.:

| | |
|---|---|
| US 1973-338019 | 19730305 |
| US 1975-590655 | 19750626 |
| NO 1974-682 | 19740227 |
| US 1976-668179 | 19760318 |
| US 1977-801952 | 19770531 |

GI




I

AB Six furanones I (R = Me, Et, PhCH2; R1 = Ph, p-O2NC6H4, p-HO2CC6H4, p-HO2CCH2CH2C6H4), useful for fluorescent labeling of biol. materials, e.g., amino acids, peptides, **immunoglobulins**, and bacteria, were prepd. from benzalacetophenones by multistep sequence. Thus, benzalacetophenone was epoxidized under basic conditions, the resultant epoxy ketone was treated with Me3COK to cleave the epoxide ring, and the produced dione was treated with (MeO)2CHNMe2 to give PhCOCOCPh:CHNMe2, which was hydrolyzed with aq. KOH, the basic soln. was acidified with HCl, and the product (I; R = H, R1 = Ph) was methylated with MeOH to give I (R = Me, R1 = Ph). I are themselves nonfluorescent but produce highly fluorescent substances upon reaction with primary amine-contg. compds. Six examples of fluorescent labeling, e.g., of Hymenolepis hana, Escherichia coli, and .gamma.-globulin, with I are given.

IT **20118-38-1P 61059-47-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and epoxidation of)

=>
=> d stat que l52 nos
L1 SCR 1840 OR 2127 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 O
R 2051 OR 2043
L2 STR
L3 0 SEA FILE=REGISTRY SSS FUL L2 NOT L1
L4 SCR 1840 OR 2127 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 O
R 2051 OR 2043
L5 STR
L6 STR
L7 STR
L8 STR
L9 STR
L10 STR
L11 ( 575) SEA FILE=REGISTRY SSS FUL L5 OR L6 OR L7
L12 ( 2502) SEA FILE=REGISTRY SSS FUL L8 OR L9
L13 ( 1035) SEA FILE=REGISTRY SSS FUL L10 NOT L4
L14 4087 SEA FILE=REGISTRY ABB=ON PLU=ON L11 OR L12 OR L13
L20 STR
L21 94 SEA FILE=REGISTRY SSS FUL L20
L22 STR
L23 STR
L24 21 SEA FILE=REGISTRY SSS FUL L22 OR L23
L25 4201 SEA FILE=REGISTRY ABB=ON PLU=ON L3 OR L14 OR L21 OR L24

```
L26          1831 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25
L27            21 SEA FILE=REGISTRY ABB=ON  PLU=ON  FC RECEPTOR?/CN
L28         28801 SEA FILE=REGISTRY ABB=ON  PLU=ON  IMMUNOGLOBULIN?
L29          6587 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27 OR (FC OR F(W)C)(W)RECEPTO
                  R?
L30        151724 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 OR ?IMMUNOGLOBULIN? OR
                  IG#
L32             1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 AND L30
L37         31935 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L29 OR FC OR F(W)C
L38             1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L37 AND L26
L52             1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L38 NOT L32

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=>
=> d ibib abs hitrn l52 1

L52  ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         1999:441770  HCAPLUS
DOCUMENT NUMBER:          131:229682
TITLE:                    Dye-Labeled Poly(organosiloxane) Microgels with
                          Core-Shell Architecture
AUTHOR(S):                Graf, Christina; Schaertl, Wolfgang; Fischer, Karl;
                          Hugenberg, Norbert; Schmidt, Manfred
CORPORATE SOURCE:         Institut fuer Physikalische Chemie, Universitaet
                          Mainz, Mainz, 55099, Germany
SOURCE:                   Langmuir (1999), 15(19), 6170-6180
                          CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER:                American Chemical Society
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   Poly(organosiloxane) microgels are highly cross-linked rather monodisperse
     spherical particles of radius about 10 nm.  Using a functionalized silane
     comonomer, i.e., (chlorobenzyl)trimethoxysilane, model particles suitable
     for studies in colloid physics are available: photoreactive and
     fluorescent dyes can be covalently bound within the microgels to prep.
     tracers for diffusion studies using forced Rayleigh scattering (FRS) and
     fluorescence correlation spectroscopy (FCS).  For the
     application as tracer particles, it is important not to influence the
     diffusion behavior by the coupled chromophores. Therefore, functionalized
     precursors with a core-shell architecture are used to minimize labeling
     effects.  The photochromic dye ortho-nitrostilbene (ONS) and the
     fluorophores rhodamine B, coumarin 343, and pyrene, resp., were then
     coupled to the functionalized cores.  The dye content of the labeled
     .mu.-gels strongly decreases with increasing thickness of the protective
     shell.  A higher polarity of the used chromophores also lowers the dye
     content significantly, while differences in the size of the used label
     mols. are less important.  The fluorescence intensity of the dye-labeled
     spheres is also influenced by the size of the protective shell which has
     been explained by differences in mobility of the labels (caging effects)
     and, at high dye concn. (thinner shell), by reabsorption.
IT   65199-97-5DP, salts or esters, reaction products with
     chlorobenzyltrimethoxysilane-methyltrimethoxysilane copolymer
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
        (dye-labeled poly(organosiloxane) microgels with core-shell
        architecture)
REFERENCE COUNT:          24    THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
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=> d stat que l53 nos
L1              SCR 1840 OR 2127 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 O
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L3            0 SEA FILE=REGISTRY SSS FUL L2 NOT L1
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R 2051 OR 2043
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L8              STR
L9              STR
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               R?
L30      151724 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 OR ?IMMUNOGLOBULIN? OR
               IG#
L32           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 AND L30
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L35         152 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26(L)?INHIBIT?
L36          23 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L33 AND L35
L37       31935 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L29 OR FC OR F(W)C
L38           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L37 AND L26
L40          59 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26(L)(?MODULAT? OR ?CONTROL?
               OR ?REGULAT?)
L41           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L40 AND L35
L42          26 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L41 OR L36
L52           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L38 NOT L32
L53          26 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L42 NOT (L32 OR L38 OR L52)


=>
=> d ibib abs hitrn l53 1-26

L53  ANSWER 1 OF 26  HCAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         2001:103108  HCAPLUS
DOCUMENT NUMBER:          134:217509
TITLE:                    Inhibition of ovulation in the rat by a leukotriene B4
                          receptor antagonist
AUTHOR(S):                Matousek, Markus; Mitsube, Kenrokuro; Mikuni, Masato;
                          Brannstrom, Mats
CORPORATE SOURCE:         Department of Obstetrics and Gynecology, Goteborg
                          University, Goteborg, S-413 45, Swed.
SOURCE:                   Molecular Human Reproduction (2001), 7(1), 35-42
                          CODEN: MHREFD; ISSN: 1360-9947
```

PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The involvement of leukotriene (LT) B4 in the ovulatory process of the rat was investigated by the use of a LTB4-receptor antagonist (ZK 158252 = L-ANT) administered either intrabursally in vivo or to the in-vitro perfused ovary. The in-vivo expts. revealed inhibition of human chorionic gonadotropin (HCG)-induced ovulation by 500 .mu.mol/L L-ANT (median 5.5, 25-75% range 1.0-6.0) compared with controls (median 9.0, range 6.25-13.5). In vitro, ovulation was induced by LH (0.2 .mu.g/mL) + 3-isobutyl-1-methylxanthine (IBMX; 0.2 mmol/L). The ovary was perfused either for 20 h, to study ovulation rate, or for 10 h to examine ovarian concns. of the ovulatory mediators matrix metalloproteinase (MMP)-2 and MMP-9, plasminogen activator (PA), prostaglandin (PG)E2 and PGF2.alpha.. Addn. of LH + IBMX resulted in a marked stimulation of steroid release and ovulations occurred in all ovaries (median 11.0, range 10.0-14.0). The L-ANT inhibited ovulation in a dose-dependent way (median 10.0, range 8.0-13.0 at 1 .mu.mol/L; median 6.0, range 3.5-10.0 at 10.mu.mol/L; median 2.0, range 0.75-5.75 at 100 .mu.mol/L). The intra-ovarian activity of PA was increased 1.5-fold by L-ANT (100 .mu.mol/L), but the concns. of PGE2 and PGF2.alpha. remained unaltered. While no changes in MMP-9 were obsd., conversion from pro-MMP-2 to active MMP-2 was inhibited by L-ANT. These results suggest that activation of the LTB4-receptor within the ovary is involved in the ovulatory process and that the effects of LTB4-receptor activation are partly mediated via MMP-2.
IT **245742-21-6**, ZK 158252
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(leukotriene B4 **receptor** antagonist **inhibition** of ovulation in rats)
REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 2 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:899249 HCAPLUS
DOCUMENT NUMBER: 135:55572
TITLE: Retinoic acid (RA) receptor transcriptional activation correlates with inhibition of 12-O-tetradecanoylphorbol-13-acetate-induced ornithine decarboxylase (ODC) activity by retinoids: A potential role for trans-RA-induced ZBP-89 in ODC inhibition
AUTHOR(S): Dawson, Marcia I.; Park, Ju Hui; Chen, Guo-Quan; Chao, Wan-Ru; Dousman, Linda; Waleh, Nahid; Hobbs, Peter D.; Jong, Ling; Toll, Lawrence; Zhang, Xiao-Kun; Gu, Jian; Agadir, Anissa; Merchant, Juanita L.; Bai, Longchuan; Verma, Ajit K.; Thacher, Scott M.; Chandraratna, Roshantha A. S.; Shroot, Braham; Hill, Donald L.
CORPORATE SOURCE: Department of Medicinal Chemistry, Molecular Medicine Research Institute, Mountain View, CA, 94043, USA
SOURCE: International Journal of Cancer (2001), 91(1), 8-21
CODEN: IJCNAW; ISSN: 0020-7136
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Evaluation of retinoic acid receptor (RAR) subtype-selective .alpha. and .gamma. agonists and antagonists and a retinoid X receptor (RXR) class-selective agonist for efficacy at inhibiting both induction of ornithine decarboxylase (ODC) by the tumor promoter 12-O-

tetradecanoylphorbol-13-acetate (TPA) in mouse epidermis and rat tracheal epithelial cells and the appearance of papillomas in mouse epidermis treated in the 2-stage tumor initiation-promotion model indicated that (i) RXR class-selective transcriptional agonists, such as MMI 1246, were not involved in ODC inhibition; (ii) RAR-selective agonists that induce gene transcription from RA-responsive elements (RAREs) were active at low concns.; (iii) RAR-selective antagonists that bind RARs and inhibit AP-1 activation on the collagenase promoter but do not activate RAREs to induce gene transcription were less effective inhibitors; and (iv) RAR.gamma.-selective retinoid agonists were more effective inhibitors of TPA-induced ODC activity than RAR.alpha.-selective agonists. These results suggest that RARE activation has a more important role in inhibition of ODC activity than RXR activation or AP-1 inhibition and that RAR.gamma.-selective agonists would be the most useful inhibitors of epithelial cell proliferation induced by tumor promoters. The natural retinoid all-trans-RA induced expression of transcription factor ZBP-89, which represses activation of the GC box in the ODC promoter by the transcription factor Sp1.

IT **138254-19-0**, MM 3986
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(retinoic acid **receptor** transcriptional activation correlates with **inhibition** of tumor promoter-induced ornithine decarboxylase activity by retinoids and role for ZBP-89 therein)

REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:307979 HCAPLUS
DOCUMENT NUMBER: 133:202727
TITLE: Identification of receptor-selective retinoids that are potent inhibitors of the growth of human head and neck squamous cell carcinoma cells
AUTHOR(S): Sun, Shi-Yong; Yue, Ping; Mao, Li; Dawson, Marcia I.; Shroot, Braham; Lamph, William W.; Heyman, Richard A.; Chandraratna, Roshantha A. S.; Shudo, Koichi; Hong, Waun K.; Lotan, Reuben
CORPORATE SOURCE: Department of Thoracic/Head and Neck Medical Oncology, The University of Texas M. D. Anderson Cancer Center, Houston, TX, 77030, USA
SOURCE: Clinical Cancer Research (2000), 6(4), 1563-1573
CODEN: CCREF4; ISSN: 1078-0432
PUBLISHER: American Association for Cancer Research
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Retinoids modulate the growth and differentiation of cancer cells presumably by activating gene transcription via the nuclear retinoic acid receptor (RAR) .alpha., .beta., and .gamma. and retinoid X receptor (RXR) .alpha., .beta., and .gamma.. We analyzed the effects of 38 RAR-selective and RXR-selective retinoids on the proliferation of 10 human head and neck squamous cell carcinoma (HNSCC) cell lines. All of these cell lines expressed constitutively all of the receptor subtypes except RAR.beta., which was detected in only two of them. Most of the RAR-selective retinoids inhibited the growth of HNSCC cells to varying degrees, whereas the RXR-selective retinoids showed very weak or no inhibitory effects. Three RAR antagonists suppressed growth inhibition by RAR-selective agonists, as well as by RAR/RXR antagonists such as 9-cis-retinoic acid. Combinations of RXR-selective and RAR-selective retinoids exhibited additive growth-inhibitory effects. Furthermore, we found that CD437, the

most potent growth-inhibitory retinoid induced apoptosis and up-regulated the expression of several apoptosis-related genes in HNSCC cells. These results indicate that: (a) retinoid receptors are involved in the growth-inhibitory effects of retinoids; (b) RXR-RAR heterodimers rather than RXR-RXR homodimer are the major mediators of growth inhibition by retinoids in HNSCC cells; and (c) induction of apoptosis can account for one mechanism by which retinoids such as CD437 inhibit the growth of HNSCC cells. Finally, these studies identified several synthetic retinoids, which are much more effective than the natural RAs and can be good candidates for chemoprevention and therapy of head and neck cancers.

IT **110368-33-7**, Ch55
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**receptor**-selective retinoids as **inhibitors** of human head and neck squamous cell carcinoma cells)

REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:705471 HCAPLUS
DOCUMENT NUMBER: 132:89965
TITLE: Mechanism of Ubiquinol Oxidation by the bc1 Complex: Different Domains of the Quinol Binding Pocket and Their Role in the Mechanism and Binding of Inhibitors
AUTHOR(S): Crofts, Antony R.; Barquera, Blanca; Gennis, Robert B.; Kuras, Richard; Guergova-Kuras, Mariana; Berry, Edward A.
CORPORATE SOURCE: Center for Biophysics and Computational Biology and Department of Biochemistry, University of Illinois at Urbana-Champaign, Urbana, IL, 61801, USA
SOURCE: Biochemistry (1999), 38(48), 15807-15826
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Structures of mitochondrial ubihydroquinone:cytochrome c oxidoreductase (bc1 complex) from several animal sources have provided a basis for understanding the functional mechanism at the mol. level. Using structures of the chicken complex with and without inhibitors, we analyze the effects of mutation on quinol oxidn. at the Qo site of the complex. We suggest a mechanism for the reaction that incorporates two features revealed by the structures, a movement of the iron sulfur protein between two sep. reaction domains on cytochrome c1 and cytochrome b and a bifurcated vol. for the Qo site. The vol. identified by inhibitor binding as the Qo site has two domains in which inhibitors of different classes bind differentially; a domain proximal to heme bL, where myxothiazole and .beta.-methoxyacrylate- (MOA-) type inhibitors bind (class II), and a distal domain close to the iron sulfur protein docking interface, where stigmatellin and 5-n-undecyl-6-hydroxy-4,7-dioxobenzothiaole (UHDBT) bind (class I). Displacement of one class of inhibitor by another is accounted for by the overlap of their vols., since the exit tunnel to the lipid phase forces the hydrophobic "tails" to occupy common space. We conclude that the site can contain only one "tailed" occupant, either an inhibitor or a quinol or one of their reaction products. The differential sensitivity of strains with mutations in the different domains is explained by the proximity of the affected residues to the binding domains of the inhibitors. New insights into mechanism are provided by anal. of mutations that affect changes in the ESR spectrum of the iron sulfur protein, assocd. with its interactions with the Qo-site occupant. The

structures show that all interactions with the iron sulfur protein must occur at the distal position. These include interactions between quinone, or class I inhibitors, and the reduced iron sulfur protein and formation of a reaction complex between quinol and oxidized iron sulfur protein. The step with high activation energy is after formation of the reaction complex, likely in formation of the semiquinone and subsequent dissocn. of the complex into products. We suggest that further progress of the reaction requires a movement of semiquinone to the proximal position, thus mapping the bifurcated reaction to the bifurcated vol. We suggest that such a movement, together with a change in conformation of the site, would remove any semiquinone formed from further interaction with the oxidized [2Fe-2S] center and also from reaction with O2 to form superoxide anion. We also identify two sep. reaction paths for exit of the two protons released in quinol oxidn.

IT **103455-29-4D**, complexes with ubiquinol-cytochrome c reductase
RL: PRP (Properties)
(different domains of the quinol **binding** pocket of the bc1 complex and their role in the mechanism and **binding** of **inhibitors**)

REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 5 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:674667 HCAPLUS
DOCUMENT NUMBER: 132:60924
TITLE: Effect of Inhibitors on the Ubiquinone Binding Capacity of the Primary Energy Conversion Site in the Rhodobacter capsulatus Cytochrome bc1 Complex
AUTHOR(S): Sharp, R. Eryl; Gibney, Brian R.; Palmitessa, Aimee; White, Jennifer L.; Dixon, Jennifer A.; Moser, Christopher C.; Daldal, Fevzi; Dutton, P. Leslie
CORPORATE SOURCE: Johnson Research Foundation Department of Biochemistry and Biophysics and Plant Science Institute, University of Pennsylvania, Philadelphia, PA, 19104, USA
SOURCE: Biochemistry (1999), 38(45), 14973-14980
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A key issue concerning the primary conversion (QO) site function in the cytochrome bc1 complex is the stoichiometry of ubiquinone/ubihydroquinone occupancy. Previous evidence suggests that the QO site is able to accommodate two ubiquinone mols., the double occupancy model [Ding, H., Robertson, D. E., Daldal, F., and Dutton, P. L. (1992) Biochem. 31, 3144-3158]. In the recently reported crystal structures of the cytochrome bc1 complex, no electron d. was identified in the QO site that could be ascribed to ubiquinone. To provide further insight into this issue, we have manipulated the cytochrome bc1 complex QO site occupancy in photosynthetic membranes from Rhodobacter capsulatus by using inhibitor titrns. and ubiquinone extn. to modulate the amt. of ubiquinone bound in the site. The nature of the QO site occupants was probed via the sensitivity of the reduced [2Fe-2S] cluster ESR (EPR) spectra to modulation of QO site occupancy. Diphenylamine (DPA) and methoxyacrylate (MOA)-stilbene are known QO site inhibitors of the cytochrome bc1 complex. Addn. of stoichiometric concns. of MOA-stilbene or excess DPA to cytochrome bc1 complexes with natural levels of ubiquinone elicits the same change in the [2Fe-2S] cluster EPR spectra; the gx resonance broadens and shifts from 1.800 to 1.783. This is exactly the same signal as that obtained when there is only one ubiquinone present in the QO site.

Furthermore, addn. of MOA-stilbene or DPA to the cytochrome bc1 complex depleted of ubiquinone does not alter the [2Fe-2S] cluster EPR spectral line shapes, which remain indicative of one ubiquinone or zero ubiquinones in the QO site, with broad gx resonances at 1.783 or 1.765, resp. The results are quite consistent with the QO site double occupancy model, in which MOA-stilbene and DPA inhibit by displacing one, but not both, of the QO site ubiquinones.

IT **103455-29-4**
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(ESR studies of the effect of **inhibitors** on ubiquinone **binding** capacity of primary energy conversion site in Rhodobacter capsulatus cytochrome bc1 complex)

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:460644 HCAPLUS
DOCUMENT NUMBER: 129:185980
TITLE: Inhibitor binding changes domain mobility in the iron-sulfur protein of the mitochondrial bc1 complex from bovine heart
AUTHOR(S): Kim, Hoeon; Xia, Di; Yu, Chang-An; Xia, Jia-Zhi; Kachurin, Anatoly M.; Zhangs, Li; Yu, Linda; Deisenhofer, Johann
CORPORATE SOURCE: Howard Hughes Medical Institute and Department of Biochemistry, University of Texas Southwestern Medical Center, Dallas, TX, 75235-9050, USA
SOURCE: Proc. Natl. Acad. Sci. U. S. A. (1998), 95(14), 8026-8033
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We have analyzed crystal structures of cytochrome bc1 complexes with electron transfer inhibitors bound to the ubiquinone binding pockets Qi and/or Qo in the cytochrome b subunit. The presence or absence of the Qi inhibitor antimycin A did not affect the binding of the Qo inhibitors. Different subtypes of Qo inhibitors had dramatically different effects on the mobility of the extramembrane domain of the iron-sulfur protein (ISP): binding of 5-undecyl-6-hydroxy-4,7-dioxobenzothiazol and stigmatellin (subtype Qo-II and Qo-III, resp.) led to a fixation of the ISP domain on the surface of cytochrome b, whereas binding of myxothiazol and methoxyacrylate-stilbene (subtype Qo-I) favored release of this domain. The native structure has an empty Qo pocket and is intermediate between these extremes. On the basis of these observations we propose a model of quinone oxidn. in the bc1 complex which incorporates fixed and loose states of the ISP as features important for electron transfer and, possibly, also proton transport.

IT **103455-29-4**
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(**inhibitor binding**-mediated changes in domain mobility in the iron-sulfur protein of the mitochondrial bc1 complex from bovine heart have mechanistic implications)

L53 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:306198 HCAPLUS
DOCUMENT NUMBER: 127:209

TITLE: Induction of the oxidative catabolism of retinoic acid in MCF-7 cells
AUTHOR(S): Krekels, M.D.W.G.; Verhoeven, A.; Van Dun, J.; Cools, W.; Van Hove, C.; Dillen, L.; Coene, M-C.; Wouters, W.
CORPORATE SOURCE: Janssen Research Foundation, Department of Oncology, Beerse, B-2340, Belg.
SOURCE: Br. J. Cancer (1997), 75(8), 1098-1104
CODEN: BJCAAI; ISSN: 0007-0920
PUBLISHER: Churchill Livingstone
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Cytochrome P 450-dependent oxidn. is a pathway for all-trans-retinoic acid (all-trans-RA) catabolism. Induction of this catabolic pathway was studied in MCF-7 breast cancer cells. MCF-7 cells showed low constitutive all-trans-RA catabolism. Concn.-dependent induction was obtained by preincubation of the cells with all-trans-RA (10-9 to 10-6 M). Onset of induction was fast, being detectable within 60 min, with maximal induction (45-fold) obtained after 16 h. Enzymic characterization of induced all-trans-RA catabolism showed an estd. Km value (Michaelis-Menten const.) of 0.33 .mu.M and a Vmax value (maximal velocity of an enzyme-catalyzed reaction) of 54.5 fmol polar all-trans-RA metabolites 106 cells-1 h-1. These kinetic parameters represent the overall formation of polar metabolites from all-trans-RA. Induction of all-trans-RA catabolism was also obtained with other retinoids, CH55 .mchgt. 13-cis-RA = All-trans-RA > 9-cis-RA > 4-keto-all-trans-RA > 4-keto-13-cis-RA > retinol. The potency of the retinoids to induce all-trans-RA catabolism was correlated to their retinoic acid receptor affinity (Crettaz et al, 1990; Repa et al, 1990; Sani et al, 1990). Induction of all-trans-RA catabolism was inhibited by actinomycin D. Furthermore, all-trans-RA did not increase cytosolic retinoic acid-binding protein (CRABP) mRNA levels. These data suggest that induction of all-trans-RA catabolism in MCF-7 cells is a retinoic acid receptor-mediated gene transcriptional event. Induced all-trans-RA catabolism was inhibited by various retinoids with decreasing potency in the order: all-trans-RA > 4-keto-all-trans-RA > 13-cis-RA > 9-cis-RA > 4-keto-13-cis-RA > retinol > CH55. The antitumoral compd. liarozole-fumarate inhibited all-trans-RA catabolism with a potency similar to that of all-trans-RA.

IT **110368-33-7**, CH55
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(induction of oxidative catabolism of retinoic acid in MCF-7 cells by retinoids by **receptor** interaction and **inhibition** by liarozole and actinomycin D in relation to retinoic acid-**binding** protein)

L53 ANSWER 8 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:143330 HCAPLUS
DOCUMENT NUMBER: 126:246352
TITLE: Inhibition of IL-1-induced IL-6 production by synthetic retinoids
AUTHOR(S): Kagechika, Hiroyuki; Kawachi, Emiko; Fukasawa, Hiroshi; Saito, Go; Iwanami, Naoko; Umemiya, Hiroki; Hashimoto, Yuichi; Shudo, Koichi
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, University of Tokyo, Tokyo, 113, Japan
SOURCE: Biochem. Biophys. Res. Commun. (1997), 231(2), 243-248
CODEN: BBRCA9; ISSN: 0006-291X
PUBLISHER: Academic
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The effects of retinoids and retinoid antagonists on IL-6 prodn. in MC3T3-E1 cells were investigated. None of the synthetic retinoids examd. stimulated IL-6 prodn., but all of them strongly inhibited IL-6 prodn. induced by mouse IL-1.alpha.. Their inhibitory activities correlated well with their differentiation-inducing activities in HL-60 assay or their binding affinities to nuclear retinoic acid receptors (RARs). Among three retinoid antagonists, two weak antagonists exhibited similar inhibition of mouse IL-1.alpha.-induced IL-6 prodn., whereas a potent retinoid antagonist, 4-(13H-10,11,12,13-tetrahydro-10,10,13,13,15-pentamethyl-dinaphtho[2,3-b][1,2-e]diazepin-7-yl)benzoic acid (LE540), enhanced IL-6 prodn. under the same conditions.

IT **110368-33-7**, Ch55
RL: BAC (Biological activity or effector, except adverse); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**inhibition** of IL-1-induced IL-6 prodn. by synthetic retinoids and retinoid antagonists in relation to differentiation-inducing activity and retinoid **receptor binding** and structure)

L53 ANSWER 9 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:135308 HCAPLUS
DOCUMENT NUMBER: 124:221563
TITLE: The RAR-RXR as well as the RXR-RXR pathway is involved in signaling growth inhibition of human CD34+ erythroid progenitor cells
AUTHOR(S): Rusten, Leiv S.; Dybedal, Ingunn; Blomhoff, Heidi Kiil; Blomhoff, Rune; Smeland, Erlend B.; Jacobsen, Sten Eirik W.
CORPORATE SOURCE: Dep. Immunol., Institute Cancer Research, Norwegian Radium Hospital, Oslo, N-0310, Norway
SOURCE: Blood (1996), 87(5), 1728-36
CODEN: BLOOAW; ISSN: 0006-4971
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Previous studies have shown that retinoic acid (RA), similar to tumor necrosis factor-.alpha. (TNF-.alpha.), can act as a bifunctional regulator of the growth of bone marrow progenitors, in that it can stimulate granulocyte-macrophage colony-stimulating factor (GM-CSF)- or interleukin-3 (IL-3)-induced GM colony formation, but potently inhibit G-CSF-induced growth. The present study, using highly enriched human CD34+ as well as Lin- murine bone marrow progenitor cells, demonstrates a potent inhibitory effect of 9-cis-RA on burst-forming unit-erythroid (BFU-e) colony formation regardless of the cytokine stimulating growth. Specifically, 9-cis-RA potently inhibited the growth of BFU-E in response to erythropoietin (Epo) (100%), stem cell factor (SCF) + Epo (92%), IL-3 + Epo (97%), IL-4 + Epo (88%), and IL-9 + Epo (100%). Erythroid colony growth was also inhibited when CD34+ progenitors were seeded at one cell per well, suggesting a direct action of RA. Using synthetic ligands to retinoic acid receptors (RARs) and retinoid X receptors (RXRs) that selectively bind and activate RAR-RXR or RXR-RXR dimers, resp., the authors dissected the involvement of the two retinoid response pathways in the regulation of normal myeloid and erythroid progenitor cell growth. Transactivation studies showed that both the RAR (Ro 13-7410) and RXR (Ro 25-6603 and Ro 25-7386) ligands were highly selective at 100 nmol/L. At this concn., Ro 13-7410 potently inhibited G-CSF-stimulated myeloid as well as SCF + Epo-induced erythroid colony growth. At the same concn., Ro 25-6603 and Ro 25-7386 had little or no effect on G-CSF-induced colony formation, whereas they inhibited 75% and 53%, resp., of SCF +

Epo-stimulated BFU-E colony growth. Thus, the RAR-RXR response pathway can signal growth inhibition of normal bone marrow myeloid and erythroid progenitor cells. In addn., the authors demonstrate a unique involvement of the RXR-RXR pathway in mediating growth inhibition of erythroid but not myeloid progenitor cells.

IT **173792-73-9**, Ro 25-6603
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(RAR-RXR and RXR-RXR **receptor** pathway signaling of cytokine-stimulated growth **inhibition** of human CD34+ erythroid progenitor cells)

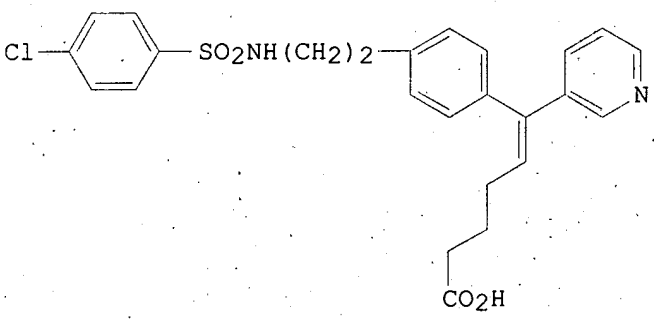
L53 ANSWER 10 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:836520 HCAPLUS
DOCUMENT NUMBER: 124:209
TITLE: Correlation of retinoid binding affinity to retinoic acid receptor .alpha. with retinoid inhibition of growth of estrogen receptor-positive MCF-7 mammary carcinoma cells
AUTHOR(S): Dawson, Marcia I.; Chao, Wan-ru; Pine, Polly; Jong, Ling; Hobbs, Peter D.; Rudd, Colette K.; Quick, Timothy C.; Niles, Richard M.; Zhang, Xiao-kun; et al.
CORPORATE SOURCE: Life Sciences Div., SRI Internatl., Menlo Park, CA, 94025, USA
SOURCE: Cancer Res. (1995), 55(19), 4446-51
CODEN: CNREA8; ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Both anchorage-dependent growth and anchorage-independent growth of the estrogen receptor-pos. mammary carcinoma cell line MCF-7 are inhibited by all-trans-retinoic acid. This cell line has nuclear retinoic acid receptors (RARs) .alpha. and .gamma.. The natural retinoids all-trans-retinoic acid and 9-cis-retinoic acid and a series of 12 conformationally restricted retinoids, which showed a range of binding selectivities for these receptors and had either agonist or antagonist activity for gene transcriptional activation by the RARs, were evaluated for their abilities to inhibit anchorage-dependent (adherent) and anchorage-independent (clonal) growth of MCF-7 cells. Correlation analyses were performed to relate growth inhibition by these retinoids with their binding affinity to RAR.alpha. or RAR.gamma.. Inhibition of anchorage-dependent growth in culture after 7 days of retinoid treatment correlated with binding to RAR.alpha. and not to RAR.gamma.. Both the RAR.alpha.-selective retinoid agonists and the two RAR antagonists that were evaluated inhibited adherent cell growth. The RAR.gamma.-selective agonists had very low growth inhibitory activity (<10%) at concns. as high as 12.5 .mu.M. These results suggest that RAR.alpha. is the retinoid receptor involved in the inhibition of adherent cell growth by retinoids and that transcriptional activation by this receptor on a RAR response element does not appear to be required for this process to occur. For this series of retinoids, inhibition of anchorage-independent growth after 21 days of retinoid treatment only correlated with binding affinity to RAR.alpha. for the retinoid agonists, although the RAR.gamma.-selective retinoids displayed weak activity. The RAR antagonists were very poor inhibitors of growth. These results suggest that activation of gene transcription by RAR.alpha. appears to be required for inhibition of anchorage-independent growth by retinoids in this estrogen receptor-pos. mammary carcinoma cell line.

IT **75664-66-3**, SR 3983 **138254-19-0**, SR 3986
RL: BAC (Biological activity or effector, except adverse); BPR (Biological

process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(correlation of retinoid **binding** affinity to retinoic acid **receptor** .alpha. with retinoid **inhibition** of growth of estrogen **receptor**-pos. MCF-7 mammary carcinoma cells in relation to structure)

L53 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:217212 HCAPLUS
DOCUMENT NUMBER: 120:217212
TITLE: 6,6-Disubstituted hex-5-enoic acid derivatives as combined thromboxane A2 receptor antagonists and synthetase inhibitors
AUTHOR(S): Soyka, Rainer; Heckel, Armin; Nickl, Josef; Eisert, Wolfgang; Mueller, Thomas H.; Weisenberger, Hans
CORPORATE SOURCE: Res. Dep., Dr. Karl Thomae GmbH, Biberach, 88397, Germany
SOURCE: J. Med. Chem. (1994), 37(1), 26-39
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI




I

AB A series of .omega.-disubstituted alkenoic acid derivs. were design and synthesized as antithrombotic inhibitors of thromboxane A2 synthetase and thromboxane A2 receptor antagonists. Hexenoic acid derivs. with a 3-pyridyl group and a 4-(2-benzenesulfonamidoethyl)phenyl substituent were found to be optimal with regard to the dual mode of action. The most potent compd., (E)-6-(4-(2-(((4-chlorophenyl)sulfonyl)amino)ethyl)phenyl)-6-(3-pyridyl)hex-5-enoic acid (I), inhibits thromboxane A2 synthetase in gel-filtered human platelets with an IC50 value of 4.5 .+-. 0.5 nM, whereas an inhibitory effect on cyclooxygenase is seen only at a much higher concn. (IC50; 240 .mu.M). Radioligand-binding studies with [3H]SQ 29,548 in washed human platelets revealed that I blocks the prostaglandin H2/thromboxane A2 receptor with an IC50 fo 19 .+-. 5 nM (n = 5) and is therefore 85-fold more potent than another combined thromboxane A2 synthetase inhibitor/receptor antagonist, Ridogrel. I inhibits the collagen-induced platelet aggregation in human platelet-rich plasma and whole blood with an EC50 of 1 .mu.M (Ridogrel: 16 .mu.M) and 100 nM, resp., and was selected for further development.

IT **153732-10-6P 153732-27-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and thromboxane A2 **receptor** antagonist and synthetase **inhibitor** activity of)

L53 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:182467 HCAPLUS
DOCUMENT NUMBER: 120:182467
TITLE: Correlation of the ability of retinoids to inhibit promoter-induced anchorage-independent growth of JB6 mouse epidermal cells with their activation of retinoic acid receptor .gamma.
AUTHOR(S): Rudd, Colette J.; Mansbridge, Jonathan N.; Suing, Kathryn D.; Dawson, Marcia I.
CORPORATE SOURCE: Life Sci. Div., SRI Int., Menlo Park, CA, 94025, USA
SOURCE: Cancer Lett. (Shannon, Irel.) (1993), 73(1), 41-9
CODEN: CALEDQ; ISSN: 0304-3835
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Retinoids inhibit the biol. effects induced in mouse epidermal cells by the tumor promoter 12-O-tetradecanoyl-phorbol-13-acetate (TPA). Specific nuclear retinoic acid receptors (RARs) have been identified in the epidermis, but the specific receptor that mediates the inhibitory response by retinoids is not established. Retinoic acid and six conformationally restricted retinoids were evaluated in an in vitro bioassay using the JB6 mouse epidermal cell line. These activities were then compared with the ability of these retinoids to activate the RARs in transient transfection assays for transcriptional activation to identify the retinoid receptor involved in inhibiting TPA-induced anchorage-independent growth. The retinoids inhibited TPA-induced colony formation of JB6 cells in semisolid medium at concns. that were not toxic based on colony formation of attached cells. These concns. ranged from less than 10-9-10-6 M. 4-(5,6,7,8-Tetrahydro-5,5,8,8-tetramethylanthracen-2-yl)benzoic acid (TTAB) was the most potent retinoid, with an EC50 of 0.8 nM. Both RAR.alpha. and RAR.gamma. were expressed in JB6 cells. Expression of RAR.beta. was not detected in these cells using a polymerase chain reaction assay, consistent with its extremely low level in mouse skin. Inhibition of the TPA response by these retinoids in JB6 cells correlated only with their transcriptional activation of RAR.gamma., but not with that of RAR.alpha.. These results suggest that RAR.gamma. is most probably the receptor that mediates the chemopreventive effects of retinoids in mouse epidermis.

IT **75664-66-3**, SR 3983
RL: BIOL (Biological study)
(epidermal cancer **inhibition** by, retinoic acid **receptors** in)

L53 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:511425 HCAPLUS
DOCUMENT NUMBER: 115:111425
TITLE: Expression of nuclear retinoic acid receptors in normal tracheobronchial cells and in lung carcinoma cells
AUTHOR(S): Nervi, Clara; Vollberg, Thomas M.; George, Margaret D.; Zelent, Arthur; Chambon, Pierre; Jetten, Anton M.
CORPORATE SOURCE: Lab. Pulm. Pathobiol., Natl. Inst. Environ. Health Sci., Research Triangle Park, NC, 27709, USA
SOURCE: Exp. Cell Res. (1991), 195(1), 163-70
CODEN: ECREAL; ISSN: 0014-4827
DOCUMENT TYPE: Journal
LANGUAGE: English

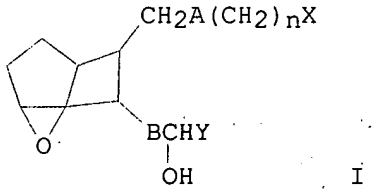
AB Retinoids are important regulators of the growth and differentiation of trachobronchial epithelial cells. To det. the mechanism of action of retinoids in these cells, the expression of nuclear retinoic acid receptors (RARs) was examd. in normal human and rabbit tracheobronchial epithelial (HBE and RbTE, resp.) cells and in several lung carcinoma cell lines. A specific nuclear RAR activity with a mol. wt. of 50,000 was identified in these cells. A correlation was found between the binding of several retinoids to this RAR and their ability to inhibit transglutaminase Type I activity. Normal HBE and RbTE cells contained 2 RAR.alpha. mRNA transcripts, 2.6 and 3.5 kb in size, and one 3.1-kb RAR.gamma. transcript. RAR.beta. transcripts were undetectable in HBE cells. RAR expression was unchanged during squamous differentiation. Treatment of HBE and RbTE cells with 100 nM retinoic acid increased RAR.beta. mRNA expression but did not change the levels of RAR.alpha. and RAR.gamma.. In contrast, retinoic acid suppressed in these cells the level of involucrin, transglutaminase Type I, and SQ37 mRNA. In comparison with normal HBE cells, certain lung carcinoma cell lines appear to have an altered expression of RAR.beta. and RAR.gamma.. Human bronchial fibroblasts (HBF) expressed RAR.alpha. and RAR.gamma. transcripts of the same size as HBE cells. HBF cells contain low levels of a 2.9- and 3.3-kb RAR.beta. mRNA. Treatment of HBF cells with retinoic acid increased the level of RAR.beta. mRNA in a time-dependent manner; the maximal induction was .apprx.15-fold. Apparently, RARs are involved in the suppression of squamous differentiation in tracheobronchial epithelial cells and lung fibroblasts are target cells for retinoids.

IT **110368-33-7**, Ch55 **110368-34-8**, Ch 30 **119567-93-0**
, Ch 20 **119567-94-1**, Ch 40
RL: BIOL (Biological study)
(retinoic acid **receptor binding** of and squamous differentiation **inhibition** by, in tracheobronchial epithelium)

L53 ANSWER 14 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:422233 HCAPLUS
DOCUMENT NUMBER: 115:22233
TITLE: Thromboxane A2 receptor antagonists for the inhibition of vasospasms and thrombocyte aggregation, following angioplasty
INVENTOR(S): Ondetti, Miguel Angel; Ogletree, Martin Lawrence; Harris, Don Navarro
PATENT ASSIGNEE(S): Squibb, E. R., and Sons, Inc., USA
SOURCE: Ger. Offen., 9 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 4013680 | A1 | 19901108 | DE 1990-4013680 | 19900427 |
| CA 2012852 | AA | 19901101 | CA 1990-2012852 | 19900322 |
| GB 2231795 | A1 | 19901128 | GB 1990-9636 | 19900430 |
| JP 02295922 | A2 | 19901206 | JP 1990-116704 | 19900501 |
| FR 2646351 | A1 | 19901102 | FR 1990-5547 | 19900502 |

PRIORITY APPLN. INFO.: US 1989-346447 19890501
OTHER SOURCE(S): MARPAT 115:22233
GI




I

AB The 7-oxabicycloheptane prostaglandin analogs I [A = CH:CH, CH2CH2; B = A, C.tplbond.C; X = OH, tetrazolyl, CO2R, CONHZ; Y = (un)substituted alkyl, aralkyl, alkenyl, (un)substituted pyridyl, etc.; R = H, alkyl; Z = R, aryl, etc.; m = 1-8] are thromboxane A2 receptor antagonists, useful for inhibiting vasospasms and thrombocyte aggregation following angioplasty (no data). Injection solns. comprised SQ-29548 2500, methylparaben 5, propylparaben 1, and NaCl 25 mg, in 5 L water.

IT **123048-11-3**, SQ 28568
RL: BIOL (Biological study)
(thromboxane A2 **receptor** antagonist, vasospasm and thrombocyte aggregation **inhibition** by, following angioplasty)

L53 ANSWER 15 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:178366 HCAPLUS
DOCUMENT NUMBER: 114:178366
TITLE: Retinoids induce tissue transglutaminase in NIH-3T3 cells
AUTHOR(S): Cai, D.; Ben, T.; De Luca, L. M.
CORPORATE SOURCE: Lab. Cell. Carcinog., Tumor Promot., Natl. Cancer Inst., Bethesda, MD, 20892, USA
SOURCE: Biochem. Biophys. Res. Commun. (1991), 175(3), 1119-24
CODEN: BBRCA9; ISSN: 0006-291X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB All-trans and 13-cis-retinoic acid (RA) as well as the synthetic compd. CH-55 enhanced tissue transglutaminase activity as they increased NIH-3T3 cell adhesiveness. The 4-hydroxyphenylretinamide with low activity in inducing attachment, lectin binding and growth inhibition failed to induce transglutaminase. Thyroxine, a compd. with a response element common to RA, was inactive. The tumor promoter 12-tetradecanoyl-phorbol-13-acetate, which increases adhesiveness with different kinetics than RA, failed to enhance transglutaminase. Thus, retinoids with biol. activity in inducing adhesion, growth inhibition and lectin binding, are also active in inducing transglutaminase activity.

IT **110368-33-7**, CH-55
RL: BIOL (Biological study)
(tissue transglutaminase induced by, cell adhesion and growth **inhibition** and lectin **binding** in relation to)

L53 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1988:504166 HCAPLUS
DOCUMENT NUMBER: 109:104166
TITLE: Inhibition of ornithine decarboxylase induction by retinobenzoic acids in relation to their binding affinities to cellular retinoid-binding proteins
AUTHOR(S): Takagi, Kanji; Suganuma, Masami; Kagechika, Hiroyuki; Shudo, Koichi; Ninomiya, Mitsuo; Muto, Yasutoshi; Fujiki, Hirota

CORPORATE SOURCE: Cancer Prev. Div., Natl. Cancer Cent. Res. Inst., Tokyo, 104, Japan
SOURCE: J. Cancer Res. Clin. Oncol. (1988), 114(3), 221-4
CODEN: JCROD7; ISSN: 0171-5216
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Retinobenzoic acids induce differentiation of human promyelocytic leukemia cells (HL-60). Like retinoic acid, 14 retinobenzoic acids inhibited the induction of ornithine decarboxylase (ODC) by teleocidin in mouse skin. The mechanism(s) of inhibition of ODC induction by 7 retinobenzoic acids, Am 80, Am 81, Am 580, Am 590, Am 68, Sa 80, and Ch 55 was compared with those for all-trans-retinoic acid and the arotinoid compd. 19. Application of 114 nmol of Am 80, Am 81, Am 580, Am 590, Am 68, Sa 80, or Ch 55, 10 min before 11.4 nmol of teleocidin, resulted in 76.7, 82.0, 76.2, 28.3, 48.4, 58.6, and 85.1% inhibition of ODC induction, resp. Since all-trans-retinoic acid and compd. 19 were also inhibitory, the authors detd. whether retinobenzoic acids bind to cellular retinoic acid-binding protein (CRABP) isolated from bovine adrenal glands. Am 80 and Am 580 inhibited the specific binding of [3H]retinoic acid to CRABP, but also showed less affinity than authentic unlabeled retinoic acid and compd. 19. Am 81, Am 590, Am 68, Sa 80, and Ch 55 at up to 10 .mu.M were not effective competitors of the binding of either [3H]retinoic acid or [3H]retinol. Apparently, the inhibition of ODC induction can be mediated by pathways that do not involve CRABP or the cellular retinol-binding protein.

IT **110368-33-7**, Ch 55
RL: BIOL (Biological study)
(ornithine decarboxylase **inhibition** by, cellular retinoid-**binding** protein and structure in relation to)

L53 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1988:469330 HCAPLUS
DOCUMENT NUMBER: 109:69330
TITLE: Characterization of binding of the methoxyacrylate inhibitors to mitochondrial cytochrome c reductase
AUTHOR(S): Brandt, Ulrich; Schaegger, Hermann; Von Jagow, Gebhard
CORPORATE SOURCE: Inst. Phys. Biochem., Univ. Muenchen, Munich, Fed. Rep. Ger.
SOURCE: Eur. J. Biochem. (1988), 173(3), 499-506
CODEN: EJBCAI; ISSN: 0014-2956
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The 3 (E)-.beta.-methoxyacrylate (MOA) inhibitors oudemansin A, strobilurin A, and MOA stilbene, which differ by >1 order of magnitude in their binding affinity to mitochondrial ubihydroquinone-cytochrome c oxidoreductase (bc1 complex), bind to a site that is not identical to the binding site for ubihydroquinone, the substrate of the outer ubiquinone reaction site (Q0 center). Although the ubihydroquinone mol. is still bound in the presence of the MOA inhibitors, its electrons cannot be transferred to the Fe-S center. A shift of the relative position of the ubihydroquinone mol. in the reaction center due to a conformational distortion of cytochrome b induced by the binding of the MOA inhibitor seems to be the reason for the blocked electron transfer. Ubihydroquinone affects the dissocn. const. values of all 3 MOA inhibitors tested; the values are raised by a const. factor of 2, although the inhibitors bind with quite different affinity. The Fe-S protein is not involved in the binding of the MOA inhibitors. These results have direct implications for the proper use of MOA inhibitors in expts. designed to analyze the structure/mechanism relationship in cytochrome c reductase. In

particular, point mutations recently described in MOA inhibitor-resistant mutants can no longer be taken to affect necessarily the ubihydroquinone-binding site.

IT **103455-29-4**
RL: BIOL (Biological study)
(ubiquinol-cytochrome c reductase **inhibition** by, kinetics of, **binding** site in)

L53 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:526601 HCAPLUS
DOCUMENT NUMBER: 107:126601
TITLE: New benzoic acid derivatives with retinoid activity: lack of direct correlation between biological activity and binding to cellular retinoic acid binding protein
AUTHOR(S): Jetten, Anton M.; Anderson, K.; Deas, M. A.; Kagechika, H.; Lotan, R.; Rearick, J. I.; Shudo, K.
CORPORATE SOURCE: Lab. Pulm. Pathobiol., Natl. Inst. Environ. Health Sci., Research Triangle Park, NC, 27709, USA
SOURCE: Cancer Res. (1987), 47(13), 3523-7
CODEN: CNREA8; ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The biol. activity of several newly synthesized benzoic acid derivs. of the Am- and Ch- series, which are structurally different from retinoic acid and arotinoids, was examd. These compds. inhibit squamous cell differentiation of rabbit tracheal epithelial cells in vitro as indicated by the inhibition of transglutaminase Type I and cholesterol 3-sulfate levels. In contrast to the inhibition of differentiation in rabbit tracheal cells, these compds. induce differentiation of mouse embryonal carcinoma F9 and human promyelocytic leukemia HL60 cells. The Am- and Ch- series of compds. also affect several parameters of cell proliferation. These agents are very potent inhibitors of growth of melanoma S91 cells and inhibit the induction of ornithine decarboxylase activity by phorbol 12-myristate 13-acetate in 3T6 fibroblasts. These results show that the Am- and Ch- derivs. elicit in several cell systems the same cellular responses as retinoic acid. Apparently, they exhibit mechanism(s) of action similar to those of retinoids. Comparison of the biol. response with the binding capacity to the cellular retinoic acid-binding protein shows a lack of a direct correlation.

IT **110368-33-7 110368-34-8**
RL: BIOL (Biological study)
(cell differentiation **modulation** and growth **inhibition** by, **binding** to cellular retinoic acid-**binding** protein correlation with)

L53 ANSWER 19 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:78495 HCAPLUS
DOCUMENT NUMBER: 106:78495
TITLE: Quantitation of drug levels and platelet receptor blockade caused by a thromboxane antagonist
AUTHOR(S): Friedhoff, Lawrence T.; Manning, J.; Funke, P. T.; Ivashkiv, E.; Tu, J.; Cooper, W.; Willard, D. A.
CORPORATE SOURCE: Squibb Inst. Med. Res., Princeton, NJ, USA
SOURCE: Clin. Pharmacol. Ther. (St. Louis) (1986), 40(6), 634-42
CODEN: CLPTAT; ISSN: 0009-9236
DOCUMENT TYPE: Journal
LANGUAGE: English
AB SQ 28,668 (I) [**87983-63-9**] is a structural analog of

thromboxane A2 [57576-52-0]. It **inhibits** the effects of thromboxane in vitro. Healthy male subjects were given either placebo or 3 equal daily doses of I ranging from 25 to 1200 mg. Plasma drug concns. increased in a dose-dependent manner. The shape of the plasma drug concn.-time curve was consistent with enterohepatic recirculation. The effects of I on ex vivo platelet aggregation suggested that I is a specific competitive antagonist of thromboxane A2 with a platelet **receptor** dissocn. const. (estd. by Schild anal.) of .apprx.19 nM. Approx. 94% occupation of thromboxane **receptors** by I was required to produce a small but measurable increase of the template bleeding time. Dose-ranging studies of antithrombotic drugs are difficult and expensive. For this reason, a method was developed that allows estn. of the dose of a thromboxane **receptor** antagonist that would be expected to be therapeutically equiv. to a given dose of aspirin.

IT **87983-63-9**
RL: BIOL (Biological study)
(platelet aggregation and thromboxane A2 **receptors** **inhibition** by, in humans)

L53 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:230538 HCAPLUS
DOCUMENT NUMBER: 104:230538
TITLE: t-PA composition and getting it into the blood stream
INVENTOR(S): Sarnoff, Stanley Jay
PATENT ASSIGNEE(S): Survival Technology, Inc., USA
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 8601104 | A1 | 19860227 | WO 1985-US1503 | 19850808 |
| W: AU, BR, JP | | | | |
| RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE | | | | |
| US 4661469 | A | 19870428 | US 1985-708845 | 19850306 |
| AU 8546744 | A1 | 19860307 | AU 1985-46744 | 19850808 |
| AU 589135 | B2 | 19891005 | | |
| EP 191056 | A1 | 19860820 | EP 1985-903966 | 19850808 |
| R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE | | | | |
| JP 61502892 | T2 | 19861211 | JP 1985-503532 | 19850808 |
| IL 76120 | A1 | 19901223 | IL 1985-76120 | 19850818 |
| WO 8605095 | A1 | 19860912 | WO 1986-US473 | 19860306 |
| W: DK, FI, HU, KR, NO | | | | |
| ZA 8601695 | A | 19861029 | ZA 1986-1695 | 19860306 |
| US 5002930 | A | 19910326 | US 1987-19564 | 19870227 |
| US 32919 | E | 19890509 | US 1987-66732 | 19870626 |
| AU 9053572 | A1 | 19911030 | AU 1990-53572 | 19900330 |
| IL 93973 | A1 | 19961031 | IL 1990-93973 | 19900401 |

PRIORITY APPLN. INFO.:
US 1984-638695 19840808
US 1985-708845 19850306
US 1985-716705 19850327
WO 1985-US1503 19850808
US 1985-782441 19851001
WO 1990-US1633 19900330

AB Tissue plasminogen activator (t-PA) absorption i.m. is enhanced by simultaneous application of hydroxylamine or a nontoxic salt thereof, and

optionally by elec. stimulation at the injection site to increase muscle blood flow, addn. of platelet aggregation inhibitors, etc. Thus, injection (i.m.) of t-PA into rabbits along with hydroxylamine.HCl increased t-PA blood plasma levels 40-fold as compared with t-PA injection alone (measured 5 min after injection).

IT **93060-40-3**
RL: BIOL (Biological study)
(thromboxane A **receptor inhibition** by, after plasminogen activator application)

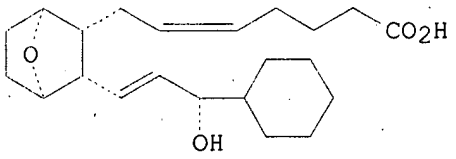
L53 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:108185 HCAPLUS
DOCUMENT NUMBER: 102:108185
TITLE: Efficacy of Bayticol (flumethrin) against ixodid ticks under field conditions, and its tolerance in cattle
AUTHOR(S): Hamel, H. D.; Dorn, H.
CORPORATE SOURCE: PH-Vet. Ber., Bayer A.-G., Cologne, 5000/80, Fed. Rep. Ger.
SOURCE: Acarol., [Proc. Int. Congr. Acarol.], 6th (1984), Meeting Date 1982, Volume 2, 1263-8. Editor(s): Griffiths, Donald Alister; Bowman, Clive Edward. Horwood: Chichester, UK.
CODEN: 52JKAI
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Field trials have been conducted in various tick-enzootic countries, in order to evaluate the efficacy of flumethrin [**69770-45-2**] against one-host and multi-host tick species. A range of concns. was tested to det. the optimum use rates for plunge dipping and spray-race treatments. Use rates of 30 ppm against one-host ticks and 40 ppm against multi-host ticks such as Hyalomma truncatum, could be recommended, based on the results of oviposition **inhibition** tests in the lab. A prolonged protective period of >7 days was found, which correlated with the larvicidal activity of flumethrin as evaluated in in vitro tests. Flumethrin was well tolerated by cattle and other domestic animals without any side effects after a dermal application of concns. >30-50 times the recommended use rate. No detectable residues were present in milk and edible tissues after spray treatments of .ltoreq.200 ppm.
IT **69770-45-2**
RL: BIOL (Biological study)
(ixodid **control** by, on cattle)

L53 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:108184 HCAPLUS
DOCUMENT NUMBER: 102:108184
TITLE: Biological evaluation of flumethrin, a new synthetic pyrethroid for the control of ticks
AUTHOR(S): Stendel, W.; Fuchs, R.
CORPORATE SOURCE: Inst. Chemother., Bayer A.-G., Wuppertal, D-5600/1, Fed. Rep. Ger.
SOURCE: Acarol., [Proc. Int. Congr. Acarol.], 6th (1984), Meeting Date 1982, Volume 2, 1252-62. Editor(s): Griffiths, Donald Alister; Bowman, Clive Edward. Horwood: Chichester, UK.
CODEN: 52JKAI
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Flumethrin (I) [**69770-45-2**] (0.5-120 ppm) **inhibited** in vitro the deposition of fertile eggs by fully-engorged females of

Boophilus microplus, B. decoloratus, and B. annulatus, including organophosphorus insecticide-resistant strains. Similar results were shown on multi-host Rhipicephalus and Amblyomma species. Larvicidal activity was shown by 0.01-1 ppm I, with little difference between species. On cattle, 30 ppm I was effective against Boophilus, and 40 ppm I against the multi-host ticks.

IT **69770-45-2**
RL: BIOL (Biological study)
(tick **control** by, on cattle)

L53 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:1050 HCAPLUS
DOCUMENT NUMBER: 102:1050
TITLE: Effects of SQ 27,427, a thromboxane A2 receptor antagonist, in the human platelet and isolated smooth muscle
AUTHOR(S): Harris, Don N.; Greenberg, Roland; Phillips, Marie B.; Michel, Inge M.; Goldenberg, Harold J.; Haslanger, Martin F.; Steinbacher, Thomas E.
CORPORATE SOURCE: Squibb Inst. Med. Res., Princeton, NJ, 08540, USA
SOURCE: Eur. J. Pharmacol. (1984), 103(1-2), 9-18
CODEN: EJPHAZ; ISSN: 0014-2999
DOCUMENT TYPE: Journal
LANGUAGE: English
GI




I

AB The TXA2 [57576-52-0] **receptor** antagonist properties of SQ 27427 (I) [**93060-40-3**] were studied in vitro, both in the human platelet and various isolated smooth muscle prepns. I was a potent **inhibitor** of human platelet aggregation induced by arachidonic acid [506-32-1], ADP [58-64-0], epinephrine [51-43-4], collagen, and the stable TXA2 agonists 9,11-azoPGH2 [57712-08-0] and SQ 26655 [82337-14-2]. **Inhibition** of platelet aggregation was achieved at I concns. that did not alter TXB2 levels. I weakly **inhibited** the formation of TXB2 from arachidonic acid and had no effect on the synthesis of PGE2 or PGI2 from arachidonic acid. I was also a weak stimulator of platelet adenylate cyclase [9012-42-4], being only 0.1% as potent as PGI2. In isolated smooth muscle expts., I was a potent and specific TXA2 **receptor** antagonist. It caused competitive antagonism of 9,11-azoPGH2-induced contractions of vascular, respiratory, and gastrointestinal smooth muscles. This antagonism was specific, as responses to norepinephrine, serotonin, PGE2, PGI2, PGF2.alpha., histamine, carbachol, and KCl were not altered by I.

IT **93060-40-3**
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(as TXA2 **receptor** antagonist)

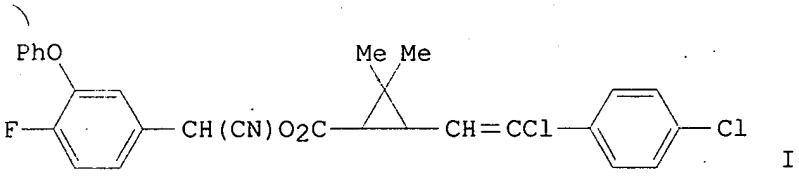
L53 ANSWER 24 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1984:604872 HCAPLUS
DOCUMENT NUMBER: 101:204872
TITLE: Thromboxane receptor antagonist properties of SQ 27,427 in the anesthetized guinea pig
AUTHOR(S): Greenberg, Roland; Steinbacher, Thomas E.; Harris, Don N.; Haslanger, Martin F.
CORPORATE SOURCE: Squibb Inst. Med. Res., Princeton, NJ, 08540, USA
SOURCE: Eur. J. Pharmacol. (1984), 103(1-2), 19-24
CODEN: EJPHAZ; ISSN: 0014-2999
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The TXA2 [57576-52-0] **receptor** antagonist properties of SQ 27427 [**92843-52-2**], were studied in vivo in the anesthetized guinea pig where changes in pulmonary resistance, dynamic compliance, and mean arterial blood pressure were measured. Both the bronchoconstrictor and pressor responses to arachidonic acid (AA) [506-32-1] and to the stable TXA2 mimic 9,11-azoPGH2 (AZO) [57712-08-0] were taken as indexes of in vivo TXA2 **receptor** activation. The administration of SQ 27427 (0.1-1.0 mg/kg, i.v.; 10.0 mg/kg, p.o.) caused dose-related **inhibitions** of both AA- and AZO-induced bronchoconstriction. Relative specificity of this antagonism was evidenced by the failure of SQ 27427 (1.0 mg/kg, i.v.) to **inhibit** histamine-induced bronchoconstriction. In the same expts. the pressor response to AA was reversed to a depressor response by SQ 27427. This reversal was abolished by indomethacin. The pressor response to AZO was antagonized by SQ 27427, but not by indomethacin. The reversal of the pressor response to AA by SQ 27427 may be due to the unmasking of the depressor effect of a cyclooxygenase product, i.e., prostacyclin. Thus, SQ 27427 is a relatively specific TXA2 **receptor** antagonist in vivo in the guinea pig.
IT **92843-52-2**
RL: BIOL (Biological study)
(as TXA2 **receptor** antagonist)

L53 ANSWER 25 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1984:137789 HCAPLUS
DOCUMENT NUMBER: 100:137789
TITLE: Relationship between binding affinities to cellular retinoic acid-binding protein and biological potency of a new series of retinoids
AUTHOR(S): Sani, Brahma P.; Dawson, Marcia I.; Hobbs, Peter D.; Chan, Rebecca L. S.; Schiff, Leonard J.
CORPORATE SOURCE: Kettering Meyer Lab., South. Res. Inst., Birmingham, AL, 35255-5305, USA
SOURCE: Cancer Res. (1984), 44(1), 190-5
CODEN: CNREA8; ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Binding** affinities of a new and unusual series of retinoic acid [302-79-4] analogs to cellular retinoic acid-**binding** protein, a possible mediator of their biol. function in the **control** of differentiation and tumorigenesis, and to serum albumin, their plasma transport protein, were detd. Also, biol. activity of these retinoids in the reversal of keratinization in hamster tracheal organ cultures was assessed and compared with their **binding** affinities. Analogs that possessed high biol. activity showed high **binding** efficiency to cellular retinoic acid-**binding** protein. Those

that were biol. less active were poor **binders** to the **binding** protein. Three retinoids, 4657-57 [**75664-66-3**], 3920-59 [86238-80-4], and 4445-75 [86471-13-8], which showed 90-100% **binding** efficiency of that of retinoic acid for cellular retinoic acid-**binding** protein, expressed high biol. activity detectable in the range of 10-10M as against 10-11M for retinoic acid. The correlation noticed in these 2 activities not only enhances the confidence in the 2 assay procedures but also paves the way for design and development of potential chemopreventive agents. No apparent differences were obsd. in the **binding** affinities of the retinoids to **binding** proteins of a normal tissue or a tumor tissue. No correlation existed between the **binding** affinities of these retinoids to serum albumin and their biol. activity. Structure-activity relationships of the retinoids in relation to their **binding** affinities and biol. activities have been discussed.

IT **75664-66-3**
RL: BIOL (Biological study)
(**binding** of, by retinoic acid-**binding** protein and serum albumin, neoplasm **inhibition** in relation to)

L53 ANSWER 26 OF 26 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1983:12895 HCAPLUS
DOCUMENT NUMBER: 98:12895
TITLE: Laboratory evaluation of flumethrin, a new synthetic pyrethroid for the control of one- and multi-host ticks
AUTHOR(S): Stendel, W.; Fuchs, R.
CORPORATE SOURCE: Inst. Chemother., Bayer A.-G., Wuppertal, D-5600, Fed. Rep. Ger.
SOURCE: VMR, Vet. Med. Rev. (1982), (2), 115-29
CODEN: VVMRDI; ISSN: 0341-9851
DOCUMENT TYPE: Journal
LANGUAGE: English
GI




I

AB In-vitro tests and **controlled** animal trials with flumethrin (I, Bayticol) [**69770-45-2**] are reported. I **inhibits** egg deposition of normal sensitive and resistant one-host ticks of multi-host ticks, at <10 ppm. In animal tests, I at 30 ppm was 100% effective against Boophilus microplus, B. decoloratus and B. annulatus, even against strains resistant to all known tickicides and against multi-host Rhipicephalus appendiculatus, R. evertsi, Amblyomma hebraeum, A. variegatum, A. cajennense and Hyalomma truncatum. The onset of action is obsd. within a few h after treatment and the effect is irreversible. I is stable in dip-wash and does not strip. Animals tolerated concns. manifold the recommended ones and no irritating effects on skin or mucous membranes were obsd.

IT **69770-45-2**
RL: BIOL (Biological study)
(tick **control** by)

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=>
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=> select hit rn 132 ;select hit rn 152;select hit rn 153 1-26
ENTER ANSWER NUMBER OR RANGE (1-):1-
E20 THROUGH E21 ASSIGNED


ENTER ANSWER NUMBER OR RANGE (1-):1-
E22 THROUGH E22 ASSIGNED

E23 THROUGH E38 ASSIGNED

=> fil reg
FILE 'REGISTRY' ENTERED AT 10:33:52 ON 21 MAR 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 American Chemical Society (ACS)

STRUCTURE FILE UPDATES:   19 MAR 2002  HIGHEST RN 401892-67-9
DICTIONARY FILE UPDATES:  19 MAR 2002  HIGHEST RN 401892-67-9

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Calculated physical property data is now available.  See HELP PROPERTIES
for more information.  See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

The P indicator for Preparations was not generated for all of the
CAS Registry Numbers that were added to the H/Z/CA/CAplus files between
12/27/01 and 1/23/02.  Use of the P indicator in online and SDI searches
during this period, either directly appended to a CAS Registry Number
or by qualifying an L-number with /P, may have yielded incomplete results.
As of 1/23/02, the situation has been resolved.  Also, note that searches
conducted using the PREP role indicator were not affected.

Customers running searches and/or SDIs in the H/Z/CA/CAplus files
incorporating CAS Registry Numbers with the P indicator between 12/27/01
and 1/23/02, are encouraged to re-run these strategies.  Contact the
CAS Help Desk at 1-800-848-6533 in North America or 1-614-447-3698,
worldwide, or send an e-mail to help@cas.org for further assistance or to
receive a credit for any duplicate searches.

=>
=>
=> d his 154

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L54           19 S E20-E38

=>
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=> d ide can l54 1-19

L54  ANSWER 1 OF 19  REGISTRY  COPYRIGHT 2002 ACS
RN   245742-21-6  REGISTRY
CN   Pentanoic acid, 5-[2-[5-hydroxy-5-[1-(3-phenyl-2-propynyl)cyclobutyl]-1,3-
     pentadienyl]cyclohexylidene]- (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   ZK 158252
FS   3D CONCORD
MF   C29 H36 O3
SR   CA
LC   STN Files:   CA, CAPLUS
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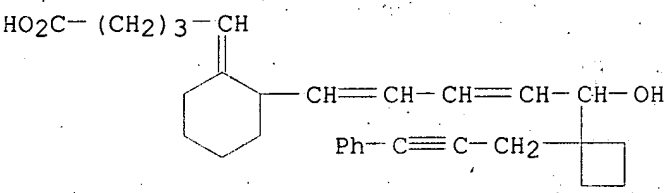

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REFERENCE   1:  135:737

REFERENCE   2:  134:217509

REFERENCE   3:  131:267422

L54  ANSWER 2 OF 19  REGISTRY  COPYRIGHT 2002 ACS
RN   173792-73-9  REGISTRY
CN   2,4-Pentadienoic acid, 3-methyl-5-[2-[(1E)-2-(2,6,6-trimethyl-1-cyclohexen-
     1-yl)ethenyl]-1-cyclohexen-1-yl]-, (2E,4E)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   2,4-Pentadienoic acid, 3-methyl-5-[2-[2-(2,6,6-trimethyl-1-cyclohexen-1-
     yl)ethenyl]-1-cyclohexen-1-yl]-, (E,E,E)-
OTHER NAMES:
CN   Ro 25-6603
FS   STEREOSEARCH
MF   C23 H32 O2
SR   CA
LC   STN Files:   BIOSIS, CA, CAPLUS, TOXCENTER, USPATFULL

Double bond geometry as shown.
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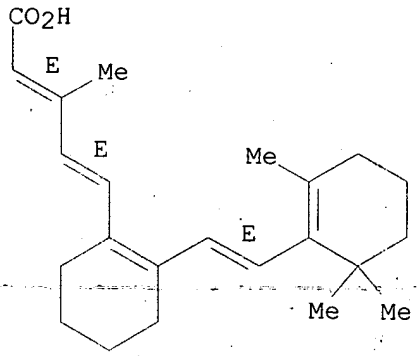


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5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:305659

REFERENCE 2: 125:222217

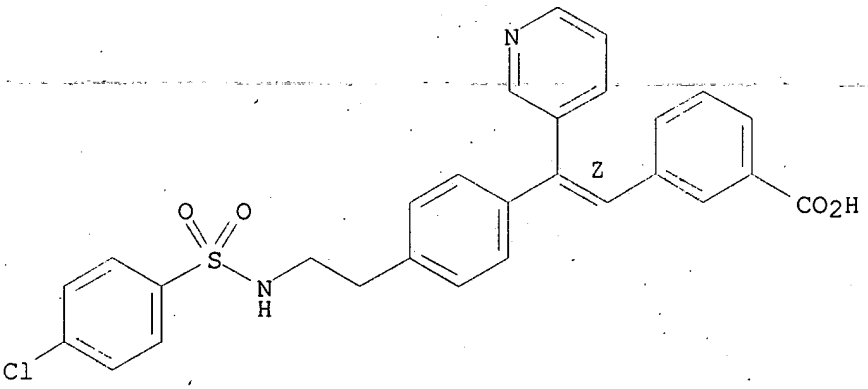
REFERENCE 3: 124:278204

REFERENCE 4: 124:221563

REFERENCE 5: 124:166072

L54 ANSWER 3 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **153732-27-5** REGISTRY
CN Benzoic acid, 3-[2-[4-[2-[[(4-chlorophenyl)sulfonyl]amino]ethyl]phenyl]-2-(3-pyridinyl)ethenyl]-, (Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H23 Cl N2 O4 S
SR CA
LC STN Files: CA, CAPLUS

Double bond geometry as shown.



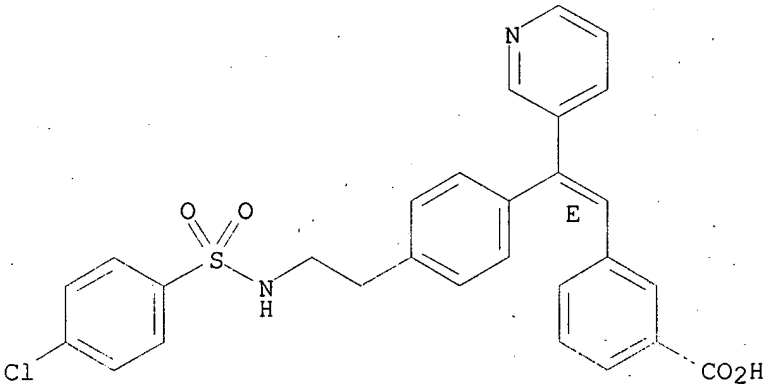
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 120:217212

L54 ANSWER 4 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **153732-10-6** REGISTRY
CN Benzoic acid, 3-[2-[4-[2-[[(4-chlorophenyl)sulfonyl]amino]ethyl]phenyl]-2-(3-pyridinyl)ethenyl]-, (E)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H23 Cl N2 O4 S
SR CA
LC STN Files: CA, CAPLUS

Double bond geometry as shown.



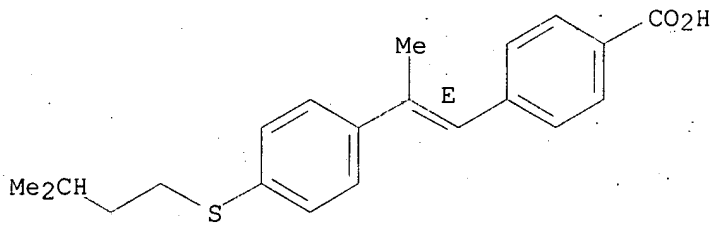

**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 120:217212

L54 ANSWER 5 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **138254-19-0** REGISTRY
CN Benzoic acid, 4-[(1E)-2-[4-[(3-methylbutyl)thio]phenyl]-1-propenyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 4-[2-[4-[(3-methylbutyl)thio]phenyl]-1-propenyl]-, (E)-
OTHER NAMES:
CN MM 3986
CN SR 3986
FS STEREOSEARCH
MF C21 H24 O2 S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

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5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:55572

REFERENCE 2: 125:316203

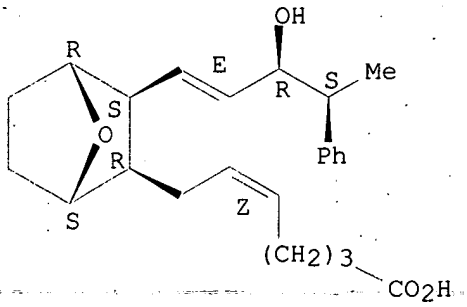
REFERENCE 3: 124:209

REFERENCE 4: 121:49616

REFERENCE 5: 116:34012

L54 ANSWER 6 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **123048-11-3** REGISTRY
CN 5-Heptenoic acid, 7-[(1S,2R,3S,4R)-3-[(1E,3R,4S)-3-hydroxy-4-phenyl-1-pentenyl]-7-oxabicyclo[2.2.1]hept-2-yl]-, (5Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Heptenoic acid, 7-[3-(3-hydroxy-4-phenyl-1-pentenyl)-7-oxabicyclo[2.2.1]hept-2-yl]-, [1S-[1.alpha.,2.alpha.(Z),3.alpha.(1E,3S*,4R*),4.alpha.]]-
CN 7-Oxabicyclo[2.2.1]heptane, 5-heptenoic acid deriv.
OTHER NAMES:
CN SQ 28568
FS STEREOSEARCH
MF C24 H32 O4
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry as shown.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

6 REFERENCES IN FILE CA (1967 TO DATE)
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6 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 115:106005

REFERENCE 2: 115:22233

REFERENCE 3: 113:165424

REFERENCE 4: 112:235023

REFERENCE 5: 111:180726

REFERENCE 6: 111:167404

L54 ANSWER 7 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **119567-94-1** REGISTRY
CN Benzoic acid, 4-[(1E)-3-[4-(1,1-dimethylethyl)phenyl]-3-oxo-1-propenyl]-
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 4-[3-[4-(1,1-dimethylethyl)phenyl]-3-oxo-1-propenyl]-, (E)-
OTHER NAMES:
CN Ch 40
FS STEREOSEARCH
MF C20 H20 O3
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

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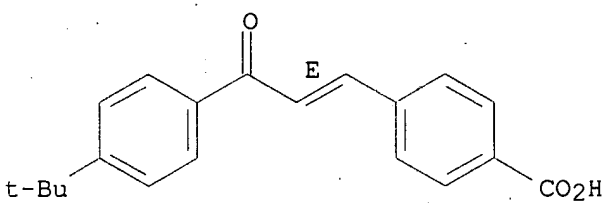

**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

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7 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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REFERENCE 2: 121:221053

REFERENCE 3: 120:95017

REFERENCE 4: 119:62406

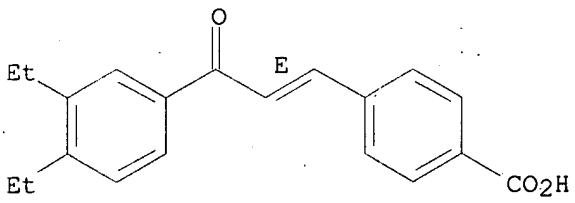
REFERENCE 5: 115:111425

REFERENCE 6: 112:198609

REFERENCE 7: 110:165533

L54 ANSWER 8 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **119567-93-0** REGISTRY
CN Benzoic acid, 4-[(1E)-3-(3,4-diethylphenyl)-3-oxo-1-propenyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 4-[3-(3,4-diethylphenyl)-3-oxo-1-propenyl]-, (E)-
OTHER NAMES:
CN Ch 20
FS STEREOSEARCH
MF C20 H20 O3
SR CA
LC STN Files: CA, CAPLUS, DDFU, DRUGU, TOXCENTER

Double bond geometry as shown.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

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4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 125:316403

REFERENCE 2: 116:252911

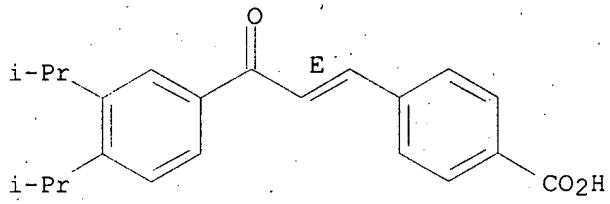
REFERENCE 3: 115:111425

REFERENCE 4: 110:165533

L54 ANSWER 9 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **110368-34-8** REGISTRY

CN Benzoic acid, 4-[(1E)-3-[3,4-bis(1-methylethyl)phenyl]-3-oxo-1-propenyl]-
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 4-[3-[3,4-bis(1-methylethyl)phenyl]-3-oxo-1-propenyl]-, (E)-
OTHER NAMES:
CN Ch 30
CN Ch 30 (retinoid)
FS STEREOSEARCH
DR 123008-50-4
MF C22 H24 O3
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Double bond geometry as shown.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 125:316403

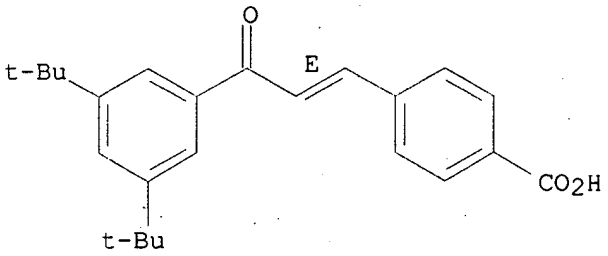
REFERENCE 2: 115:111425

REFERENCE 3: 110:165533

REFERENCE 4: 107:126601

L54 ANSWER 10 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **110368-33-7** REGISTRY
CN Benzoic acid, 4-[(1E)-3-[3,5-bis(1,1-dimethylethyl)phenyl]-3-oxo-1-
propenyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 4-[3-[3,5-bis(1,1-dimethylethyl)phenyl]-3-oxo-1-propenyl]-,
(E)-
OTHER NAMES:
CN Ch 55
FS STEREOSEARCH
MF C24 H28 O3
SR CA
LC STN Files: BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, EMBASE, TOXCENTER,
USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.

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49 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 134:80645

REFERENCE 2: 133:275967

REFERENCE 3: 133:202727

REFERENCE 4: 133:99541

REFERENCE 5: 132:233218

REFERENCE 6: 130:320477

REFERENCE 7: 129:117505

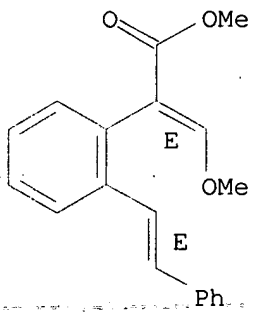
REFERENCE 8: 128:43515

REFERENCE 9: 127:229396

REFERENCE 10: 127:188955

L54 ANSWER 11 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **103455-29-4** REGISTRY
CN Benzeneacetic acid, .alpha.-(methoxymethylene)-2-[(1E)-2-phenylethenyl]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzeneacetic acid, .alpha.-(methoxymethylene)-2-(2-phenylethenyl)-, methyl ester, (E,E)-
FS STEREOSEARCH
MF C19 H18 O3
SR CA
LC STN Files: CA, CAPLUS, MEDLINE, SPECINFO, TOXCENTER, USPATFULL

Double bond geometry as shown.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

14 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
14 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:164018

REFERENCE 2: 133:27880

REFERENCE 3: 132:89965

REFERENCE 4: 132:60924

REFERENCE 5: 129:185980

REFERENCE 6: 127:328208

REFERENCE 7: 126:274931

REFERENCE 8: 126:114577

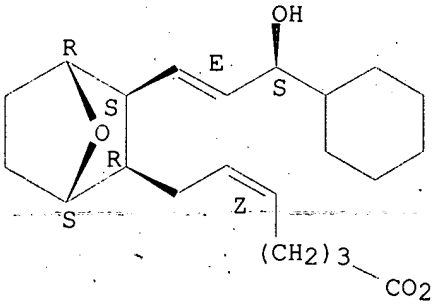
REFERENCE 9: 120:294381

REFERENCE 10: 119:67877

L54 ANSWER 12 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **93060-40-3** REGISTRY
CN 5-Heptenoic acid, 7-[(1S,2R,3S,4R)-3-[(1E,3S)-3-cyclohexyl-3-hydroxy-1-propenyl]-7-oxabicyclo[2.2.1]hept-2-yl]-, (5Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Heptenoic acid, 7-[3-(3-cyclohexyl-3-hydroxy-1-propenyl)-7-oxabicyclo[2.2.1]hept-2-yl]-, [1S-[1.alpha.,2.alpha.(Z),3.alpha.(1E,3R*),4.alpha.]]-
CN 7-Oxabicyclo[2.2.1]heptane, 5-heptenoic acid deriv.
OTHER NAMES:
CN SQ 27427
FS STEREOSEARCH
MF C22 H34 O4
LC STN Files: AGRICOLA, BEILSTEIN*, BIOTECHNO, CA, CAPLUS, DDFU, DRUGU, EMBASE, PHAR, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.

Double bond geometry as shown.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 121:73064

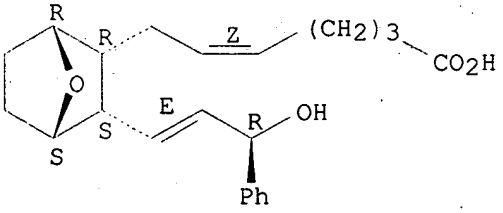
REFERENCE 2: 112:235023

REFERENCE 3: 104:230538

REFERENCE 4: 102:1050

L54 ANSWER 13 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **92843-52-2** REGISTRY
CN 5-Heptenoic acid, 7-[3-(3-hydroxy-3-phenyl-1-propenyl)-7-oxabicyclo[2.2.1]hept-2-yl]-, [1.alpha.,2.beta.(Z),3.beta.(1E,3R*),4.alpha.]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Heptenoic acid, 7-[3-(3-hydroxy-3-phenyl-1-propenyl)-7-oxabicyclo[2.2.1]hept-2-yl]-, [1.alpha.,2.beta.(Z),3.beta.(1E,3R*),4.alpha.]-(.+-.)-
CN 7-Oxabicyclo[2.2.1]heptane, 5-heptenoic acid deriv.
FS STEREOSEARCH
MF C22 H28 O4
LC STN Files: CA, CAPLUS

Relative stereochemistry.
Double bond geometry as shown.



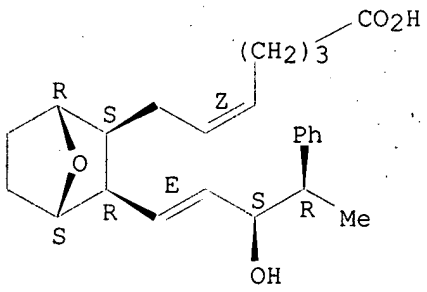
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 101:204872

L54 ANSWER 14 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **87983-63-9** REGISTRY
CN 5-Heptenoic acid, 7-[(1R,2S,3R,4S)-3-[(1E,3S,4R)-3-hydroxy-4-phenyl-1-pentenyl]-7-oxabicyclo[2.2.1]hept-2-yl]-, (5Z)-rel- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Heptenoic acid, 7-[3-(3-hydroxy-4-phenyl-1-pentenyl)-7-oxabicyclo[2.2.1]hept-2-yl]-, [1.alpha.,2.alpha.(Z),3.alpha.(1E,3S*,4R*),4.alpha.]-
CN 7-Oxabicyclo[2.2.1]heptane, 5-heptenoic acid deriv.
OTHER NAMES:
CN SQ 28668
FS STEREOSEARCH
MF C24 H32 O4
LC STN Files: ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, DDFU, DRUGU, EMBASE, IPA, MEDLINE, PHAR, PROMT, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Relative stereochemistry.
Double bond geometry as shown.
Currently available stereo shown.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

14 REFERENCES IN FILE CA (1967 TO DATE)
14 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:694

REFERENCE 2: 135:205553

REFERENCE 3: 127:130997

REFERENCE 4: 121:73064

REFERENCE 5: 115:106005

REFERENCE 6: 111:33370

REFERENCE 7: 109:184166

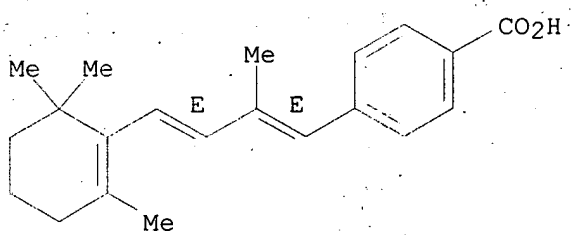
REFERENCE 8: 108:48997

REFERENCE 9: 108:30566

REFERENCE 10: 107:624

L54 ANSWER 15 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **75664-66-3** REGISTRY
CN Benzoic acid, 4-[(1E,3E)-2-methyl-4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-1,3-butadienyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 4-[2-methyl-4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-1,3-butadienyl]-, (E,E)-
OTHER NAMES:
CN BASF 37400
CN SR 3983
CN SRI 2965-38
FS STEREOSEARCH
MF C21 H26 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

19 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
19 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 127:355043

REFERENCE 2: 126:311735

REFERENCE 3: 124:209

REFERENCE 4: 120:315175

REFERENCE 5: 120:182467

REFERENCE 6: 120:95771

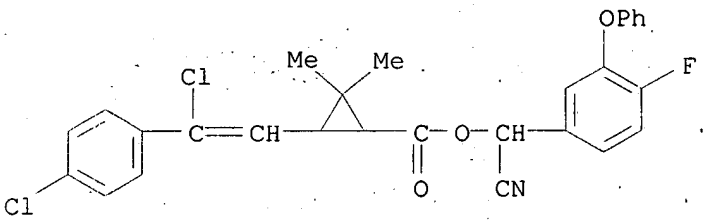
REFERENCE 7: 120:95680

REFERENCE 8: 119:151651

REFERENCE 9: 119:62406

REFERENCE 10: 116:158918

L54 ANSWER 16 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **69770-45-2** REGISTRY
CN Cyclopropanecarboxylic acid, 3-[2-chloro-2-(4-chlorophenyl)ethenyl]-2,2-dimethyl-, cyano(4-fluoro-3-phenoxyphenyl)methyl ester (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Bayticol
CN Bayticol Pour-on
CN Bayvarol
CN FCR 2769
CN Flumethrin
FS 3D CONCORD
MF C28 H22 Cl2 F N O3
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, MEDLINE, MRCK*, NIOSHTIC, PROMT, TOXCENTER, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

115 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
116 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:133816

REFERENCE 2: 136:4861

REFERENCE 3: 135:340456

REFERENCE 4: 135:268702

REFERENCE 5: 135:222865

REFERENCE 6: 135:15451

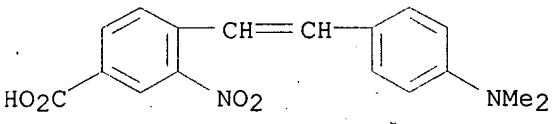
REFERENCE 7: 134:371766

REFERENCE 8: 134:349373

REFERENCE 9: 134:174233

REFERENCE 10: 134:143283

L54 ANSWER 17 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **65199-97-5** REGISTRY
CN Benzoic acid, 4-[2-[4-(dimethylamino)phenyl]ethenyl]-3-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C17 H16 N2 O4
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

7 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 131:229682

REFERENCE 2: 112:37143

REFERENCE 3: 111:135189

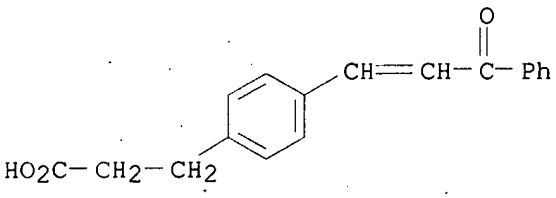
REFERENCE 4: 110:24585

REFERENCE 5: 91:56115

REFERENCE 6: 89:42075

REFERENCE 7: 88:21879

L54 ANSWER 18 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **61059-47-0** REGISTRY
CN Benzenepropanoic acid, 4-(3-oxo-3-phenyl-1-propenyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C18 H16 O3
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

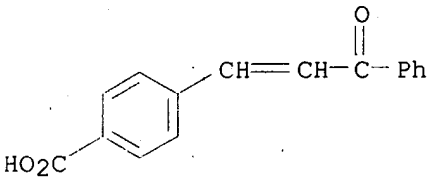
REFERENCE 1: 87:167872

REFERENCE 2: 87:152001

REFERENCE 3: 87:135018

REFERENCE 4: 85:177244

L54 ANSWER 19 OF 19 REGISTRY COPYRIGHT 2002 ACS
RN **20118-38-1** REGISTRY
CN Benzoic acid, 4-(3-oxo-3-phenyl-1-propenyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, p-(2-benzoylvinyl)- (8CI)
OTHER NAMES:
CN 4-(2-Benzoylvinyl)benzoic acid
FS 3D CONCORD
MF C16 H12 O3
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

24 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
24 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:5455

REFERENCE 2: 130:52857

REFERENCE 3: 129:261547

REFERENCE 4: 129:203719

REFERENCE 5: 128:322085

REFERENCE 6: 128:302106

REFERENCE 7: 127:347733

REFERENCE 8: 126:187485

REFERENCE 9: 126:105565

REFERENCE 10: 125:198514